Subject: **FINANCIAL MANAGEMENT**	
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FINANCIAL MANAGEMENT OF BUSINESS EXPANSION, COMBINATION AND ACQUISITION

STRUCTURE

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1.0 OBJECTIVES

After going through this lesson, the learners will be able to

- Know the meaning and advantages of merger and acquisition.

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- Understand the financial evaluation of a merger and acquisition.
- Elaborate the financing techniques of merger and acquisition.
- Understand regulations and SEBI guidelines regarding merger and acquisition.

1.1 INTRODUCTION

Wealth maximisation is the main objective of financial management and growth is essential for increasing the wealth of equity shareholders. The growth can be achieved through expanding its existing markets or entering in new markets. A company can expand/diversify its business internally or externally which can also be known as internal growth and external growth. Internal growth requires that the company increase its operating facilities i.e. marketing, human resources, manufacturing, research, IT etc. which requires huge amount of funds. Besides a huge amount of funds, internal growth also require time. Thus, lack of financial resources or time needed constrains a company's space of growth. The company can avoid these two problems by acquiring production facilities as well as other resources from outside through mergers and acquisitions.

1.2 MERGERS AND ACQUISITIONS

Mergers and acquisitions are the most popular means of corporate restructuring or business combinations in comparison to amalgamation, takeovers, spin-offs, leverage buy-outs, buy-back of shares, capital re-organisation, sale of business units and assets etc. Corporate restructuring refers to the changes in ownership, business mix, assets mix and alliances with a motive to increase the value of shareholders. To achieve the objective of wealth maximisation, a company should

continuously evaluate its portfolio of business, capital mix, ownership and assets arrangements to find out opportunities for increasing the wealth of shareholders. There is a great deal of confusion and disagreement regarding the precise meaning of terms relating to the business combinations, i.e. mergers, acquisition, take-over, amalgamation and consolidation. Although the economic considerations in terms of motives and effect of business combinations are similar but the legal procedures involved are different. The mergers/amalgamations of corporates constitute a subject-matter of the Companies Act and the acquisition/takeover fall under the purview of the Security and Exchange Board of India (SEBI) and the stock exchange listing agreements.

A merger/amalgamation refers to a combination of two or more companies into one company. One or more companies may merge with an existing company or they may merge to form a new company. Laws in India use the term amalgamation for merger for example, Section 2 (IA) of the Income Tax Act, 1961 defines amalgamation as the merger of one or more companies (called amalgamating company or companies) with another company (called amalgamated company) or the merger of two or more companies to form a new company in such a way that all assets and liabilities of the amalgamating company or companies become assets and liabilities of the amalgamated company and shareholders holding not less than nine-tenths in value of the shares in the amalgamating company or companies become shareholders of the amalgamated company. After this, the term merger and acquisition will be used interchangeably. Merger or amalgamation may take two forms: merger through absorption, merger through consolidation. Absorption is a combination of two or more companies into an existing company. All companies except one lose their identity in a merger through absorption. For example, absorption of Tata Fertilisers Ltd. (TFL) by Tata Chemical Limited (TCL). Consolidation is a combination of two or more companies into a new company. In this form of merger, all companies are legally

dissolved and new company is created for example Hindustan Computers Ltd., Hindustan Instruments Limited, Indian Software Company Limited and Indian Reprographics Ltd. Lost their existence and create a new entity HCL Limited.

1.2.1 Types of Mergers

Mergers may be classified into the following three types- (i) horizontal, (ii) vertical and (iii) conglomerate.

Horizontal Merger

Horizontal merger takes place when two or more corporate firms dealing in similar lines of activities combine together. For example, merger of two publishers or two luggage manufacturing companies. Elimination or reduction in competition, putting an end to price cutting, economies of scale in production, research and development, marketing and management are the often cited motives underlying such mergers.

Vertical Merger

Vertical merger is a combination of two or more firms involved in different stages of production or distribution. For example, joining of a spinning company and weaving company. Vertical merger may be forward or backward merger. When a company combines with the supplier of material, it is called backward merger and when it combines with the customer, it is known as forward merger. The main advantages of such mergers are lower buying cost of materials, lower distribution costs, assured supplies and market, increasing or creating barriers to entry for competitors etc.

Conglomerate merger

Conglomerate merger is a combination in which a firm in one industry combines with a firm from an unrelated industry. A typical example is merging of different businesses like manufacturing of cement products, fertilisers products, electronic products, insurance investment and advertising agencies. Voltas Ltd. is an example of a conglomerate company. Diversification of risk constitutes the rationale for such mergers.

1.2.2 Advantages of merger and acquisition

The major advantages of merger/acquisitions are mentioned below:

Economies of Scale: The operating cost advantage in terms of economies of scale is considered to be the primary objective of mergers. These economies arise because of more intensive utilisation of production capacities, distribution networks, engineering services, research and development facilities, data processing system etc. Economies of scale are the most prominent in the case of horizontal mergers. In vertical merger, the principal sources of benefits are improved coordination of activities, lower inventory levels.

Synergy: It results from complementary activities. For examples, one firm may have financial resources while the other has profitable investment opportunities. In the same manner, one firm may have a strong research and development facilities. The merged concern in all these cases will be more effective than the individual firms combined value of merged firms is likely to be greater than the sum of the individual entities.

Strategic benefits: If a company has decided to enter or expand in a particular industry through acquisition of a firm engaged in that

industry, rather than dependence on internal expansion, may offer several strategic advantages: (i) it can prevent a competitor from establishing a similar position in that industry; (ii) it offers a special timing advantages, (iii) it may entail less risk and even less cost.

Tax benefits: Under certain conditions, tax benefits may turn out to be the underlying motive for a merger. Suppose when a firm with accumulated losses and unabsorbed depreciation mergers with a profit-making firm, tax benefits are utilised better. Because its accumulated losses/unabsorbed depreciation can be set off against the profits of the profit-making firm.

Utilisation of surplus funds: A firm in a mature industry may generate a lot of cash but may not have opportunities for profitable investment. In such a situation, a merger with another firm involving cash compensation often represent a more effective utilisation of surplus funds.

Diversification: Diversification is yet another major advantage especially in conglomerate merger. The merger between two unrelated firms would tend to reduce business risk, which, in turn reduces the cost of capital (K_0) of the firm's earnings which enhances the market value of the firm.

1.3 LEGAL PROCEDURE OF MERGER AND ACQUISITION

The following is the summary of legal procedures for merger or acquisition as per Companies Act, 1956:

- Permission for merger: Two or more companies can amalgamate only when amalgamation is permitted under their memorandum of association. Also, the acquiring company should have the permission in its object clause to carry on the business of the acquired company.

- Information to the stock exchange: The acquiring and the acquired companies should inform the stock exchanges where they are listed about the merger/acquisition.
- Approval of board of directors: The boards of the directors of the individual companies should approve the draft proposal for amalgamation and authorize the managements of companies to further pursue the proposal.
- Application in the High Court: An application for approving the draft amalgamation proposal duly approved by the boards of directors of the individual companies should be made to the High Court. The High Court would convene a meeting of the shareholders and creditors to approve the amalgamation proposal. The notice of meeting should be sent to them at least 21 days in advance.
- Shareholders' and creditors' meetings: the individual companies should hold separate meetings of their shareholders and creditors for approving the amalgamation scheme. At least, 75 per cent of shareholders and creditors in separate meeting, voting in person or by proxy, must accord their approval to the scheme.
- Sanction by the High Court: After the approval of shareholders and creditors, on the petitions of the companies, the High Court will pass order sanctioning the amalgamation scheme after it is satisfied that the scheme is fair and reasonable. If it deems so, it can modify the scheme. The date of the court's hearing will be published in two newspapers, and also, the Regional Director of the Company Law Board will be intimated.
- Filing of the Court order: After the Court order, its certified true copies will be filed with the Registrar of Companies.

- Transfer of assets and liabilities: The assets and liabilities of the acquired company will be transferred to the acquiring company in accordance with the approved scheme, with effect from the specified date.
- Payment by cash or securities: As per the proposal, the acquiring company will exchange shares and debentures and/or pay cash for the shares and debentures of the acquired company. These securities will be listed on the stock exchange.

1.4 FINANCIAL EVALUATION OF A MERGER/ACQUISITION

A merger proposal be evaluated and investigated from the point of view of number of perspectives. The engineering analysis will help in estimating the extent of operating economies of scale, while the marketing analysis may be undertaken to estimate the desirability of the resulting distribution network. However, the most important of all is the financial analysis or financial evaluation of a target candidate. An acquiring firm should pursue a merger only if it creates some real economic values which may arise from any source such as better and ensured supply of raw materials, better access to capital market, better and intensive distribution network, greater market share, tax benefits, etc.

The shareholders of the target firm will ordinarily demand a price for their shares that reflects the firm's value. For prospective buyer, this price may be high enough to negate the advantage of merger. This is particularly true if several acquiring firms are seeking merger partner, and thus, bidding up the prices of available target candidates. The point here is that the acquiring firm must pay for what it gets. The financial evaluation of a target candidate, therefore, includes the determination of

the total consideration as well as the form of payment, i.e., in cash or securities of the acquiring firm. An important dimension of financial evaluation is the determination of Purchase Price.

Determining the purchase price: The process of financial evaluation begins with determining the value of the target firm, which the acquiring firm should pay. The total purchase price or the price per share of the target firm may be calculated by taking into account a host of factors. Such as assets, earnings, etc.

The market price of a share of the target can be a good approximation to find out the value of the firm. Theoretically speaking, the market price of share reflects not only the current earnings of the firm, but also the investor's expectations about future growth of the firm. However, the market price of the share cannot be relied in many cases or may not be available at all. For example, the target firm may be an unlisted firm or not being traded at the stock exchange at all and as a result the market price of the share of the target firm is not available. Even in case of listed and oftenly traded company, a complete reliance on the market price of a share is not desirable because (i) the market price of the share may be affected by insiders trading, and (ii) sometimes, the market price does not fully reflect the firm's financial and profitability position, as complete and correct information about the firm is nto available to the investors.

Therefore, the value of the firm should be assessed on the basis of the facts and figures collected from various sources including the published financial statements of the target firm. The following approaches may be undertaken to assess the value of the target firm:

1 Valuation based on assets: In a merger situation, the acquiring firm 'purchases' the target firm and, therefore, it should be ready to pay the worth of the latter. The worth of the target firm, no doubt, depends

upon the tangible and intangible assets of the firm. The value of a firm may be defined as:

Value = Value of all assets – External liabilities

In order to find out the asset value per share, the preference share capital, if any, is deducted from the net assets and the balance is divided by the number of equity shares. It may be noted that the values of all tangible and intangible assets are incorporated here. The value of goodwill may be calculated if not given in the balance sheet, and included. However, the fictious assets are not included in the above valuation. The assets of a firm may be valued on the basis of book values or realisable values as follows:

2. Valuation based on earnings: The target firm may be valued on the basis of its earnings capacity. With reference to the capital funds invested in the target firm, the firms value will have a positive correlations with the profits of the firm. Here, the profits of the firm can either be past profits or future expected profits. However, the future expected profits may be preferred for obvious reasons. The acquiring firm shows interest in taking over the target firm for the synergistic efforts or the growth of the new firm. The estimate of future profits (based on past experience) carry synergistic element in it. Thus, the future expected earnings of the target firm give a better valuation. These expected profit figures are, however, accounting figures and suffer from various limitations and, therefore, should be converted into future cash flows by adjusting non-cash items.

In the earnings based valuation, the PAT (Profit After Taxes) is multiplied by the Price-Earnings Ratio to find out the value.

Market price per share = EPS × PE ratio

The earnings based valuation can also be made in terms of earnings yield as follows:

$$\text{Earnings yield} = \frac{\text{EPS}}{\text{MPS}} \times 100$$

The earnings yield gives an idea of earnings as a percentage of market value of a share. It may be noted that for this valuation, the historical earnings or expected future earnings may be considered.

Earnings valuation may also be found by capitalising the total earnings of the firm as follows:

$$\text{Value} = \frac{\text{Earnings}}{\text{Capitalisation rate}} \times 100$$

3. Dividend-based valuation: In the cost of capital calculation, the cost of equity capital, k_e, is defined (under constant growth model) as:

$$k_e = \frac{D_0(1+g)}{P_0} + g = \frac{D_1}{P_0} + g$$

D_0 = Dividend in current year

D_1 = Dividend in the first year

g = Growth rate of dividend

P_0 = Initial price

This can be used to find out the P_0 as follows:

$$P_0 = \frac{D_0(1+g)}{k_e - g} = \frac{D_1}{k_e - g}$$

For example, if a company has just paid a dividend of Rs. 15 per share and the growth rate in dividend is 7%. At equity capitalisation of 20%, the market price of the share is:

$$P_0 = \frac{15(1+0.7)}{.20-.07} = \frac{16.05}{.13} = \text{Rs. } 123.46$$

The dividend yield, like earnings yield can be calculated as:

$$\text{Dividend yield} = \frac{\text{Div. Per Share}}{\text{Market Price}} \times 100$$

4. Capital Asset Pricing Model (CAPM)-based share valuation: The CAPM is used to find out the expected rate of return, R_s, as follows:

$$R_s = I_{RF} + (R_M - I_{RF})\beta$$

Where,

R_s = Expected rate of return, I_{RF} = Risk free rate of return, R_M = Rate of Return on market portfolio, β = Sensitivity of a share to market.

For example, R_M is 12%, I_{RF} is 8% and β is 1.3, the R_s is:

$R_s = I_{RF} + (R_M - I_{RF})\beta$

$= 0.08 + (0.12 - 0.08)\ 1.3 = 13.2$

If the dividend paid by the company is Rs. 20, the market price of the share is:

$$P_0 = \frac{\text{Div}}{R_s} = \frac{20}{0.132} = \text{Rs. } 151.51.$$

5. Valuation based on cash flows: Valuation of a target firm can also be made on the basis of firm's cash flows. In this case, the value of the target firm may be arrived at by discounting the cash flows, as in the case of NPV method of capital budgeting as follows:

i) Estimate the future cash inflows (i.e., Profit after tax + Non-cash expenses).

ii) Find out the total present value of these cash flows by discounting at an appropriate rate with reference to the risk class and other factors.

iii) If the acquiring firm is agreeing to takeover the liabilities of the target firm, then these liabilities are treated as cash outflows at time zero and hence deducted form the present value of future cash inflows [as calculated in step (ii) above].

iv) The balancing figure is the NPV of the firm and may be considered as the maximum purchase price, which the acquiring firm should be ready to pay. The procedure for finding out the valuation based on cash flows may be summarized as follows:

$$MPP = \sum_{i=1}^{n} \frac{C_i}{(1+k)^i} - L$$

where MPP = Maximum purchase price, C_i = Cash inflows over different years, L = Current value of liabilities, and k = Appropriate discount rate.

6. Other methods of valuation: There are two other methods of valuation of business. Investors provide funds to a company and expect a minimum return which is measured as the opportunity cost of the investors, or, what the investors could have earned elsewhere. If the company is earning less than this opportunity cost of the investors, the company is belying the expectations of the investors. Conversely, if it is earning more, then it is creating additional value. New concepts such as Economic Value Added (EVA) and Market Value Added (MVA) can be used along with traditional measures of Return on Net Worth (RONW) to measure the creation of shareholders value over a period.

(a) Economic Value Added: EVA is based upon the concept of economic return which refers to excess of after tax return on capital

employed over the cost of capital employed. The concept of EVA, as developed by Stern Steward and Co. of the U.S., compares the return on capital employed with the cost of capital of the firm. It takes into account the minimum expectations of the shareholders. EVA is defined in terms of returns earned by the company in excess of the minimum expected return of the shareholders. EVA is calculated as the net operating profit (Earnings before Interest but after taxes) minus the capital charges (capital employed × cost of capital). This can be presented as follows:

EVA = EBIT - Taxes - Cost of funds employed

= Net Operating Profit after Taxes - Cost of Capital Employed

where, Net Operating Profit after Taxes represents the total pool of profit available to provide a return to the lenders and the shareholders, and Cost of Capital Employed is Weighted Average Cost of Capital × Average Capital employed.

So, EVA is the post-tax return on capital employed adjusted for tax shield of debt) less the cost of capital employed. It measures the profitability of a company after having taken cost of debt (Interest) is deducted in the income statement. In the calculation of EVA, the cost of equity is also deducted. The resultant figure shows as to how much has been added in value of the firm, after meeting all costs. It should be pointed out that there is more to calculation of cost of equity than simple deduction of the dividends paid. So, EVA represents the value added in excess of the cost of capital employed. EVA increases if:

i) Operating profits grow without employing additional capital, i.e., through greater efficiency.

ii) Additional capital is invested in the projects that give higher returns than the cost of procuring new capital, and

iii) Unproductive capital is liquidated, i.e., curtailing the unproductive uses of capital.

EVA can be used as a tool in decision-making within an enterprise. It can help integration of customer satisfaction, operating efficiencies and, management and financial policies in a single measure. However, EVA is based on the performance of one year and does not allow for increase in economic value that may result from investing in new assets that have not yet had time to show the results.

In India, EVA has emerged as a popular measure to understand and evaluate financial performance of a company. Several companies have started showing the EVA during a year as a part of the Annual Report. Hero Honda Ltd., BPL Ltd., Hindustan Lever Ltd., Infosys Technologies Ltd. And Balrampur Chini Mills Ltd. Are a few of them.

(b) Market Value Added (MVA) is another concept used to measure the performance and as a measure of value of a firm. MVA is determined by measuring the total amount of funds that have been invested in the company (based on cash flows) and comparing with the current market value of the securities of the company. The funds invested include borrowings and shareholders funds. If the market value of securities exceeds the funds invested, the value has been created.

1.5 FINANCING TECHNIQUES IN MERGER/ACQUISITION

After the value of a firm has been determined on the basis of the preceding analysis, the next step is the choice of the method of payment to the acquired firm. The choice of financial instruments and techniques in acquiring a firm usually has an effect on the purchasing agreement. The payment may take the form of either cash or securities, i.e., ordinary shares, convertible securities, deferred payment plans and tender offers.

Ordinary shares financing: When a company is considering to use ordinary shares to finance a merger, the Relative Price-Earnings (P/E) ratios of two firms are an important consideration. For instance, for a firm having a high P/E ratio, ordinary shares represent an ideal method for financing mergers and acquisitions. Similarly, the ordinary shares are more advantageous for both companies when the firm to be acquired has low P/E ratio. This is illustrated below:

TABLE 1.1: EFFECT OF MERGER ON FIRM A'S EPS AND MPS

(a) Pre-merger situation:	Firm A	Firm B
Earnings after taxes (EAT)	5,00,000	2,50,000
Number of shares outstanding (N)	1,00,000	50,000
EPS (EAT/N)	5	5
Price-earnings (P/E) ratio	10 times	4 times
Market price per share, MPS (EPS × P/E ratio)	50	20
Total market value of the firm [(N × MPS) Or (EAT × P/E ratio)]	50,00,000	10,00,000
(b) Post merger situation: assuming exchange ratio of shares as	2.5 : 1	1 : 1
EATc of combined firm	7,50,000	7,50,000
Number of shares outstanding after additional shares issued	1,20,000	1,50,000
EPSc (EATc/N)	6.25	5.00
P/Ec ratio	×10	×10
MPSc	62.50	50.00
Total market value	75,00,000	75,00,000

From a perusal of Table 1.1, certain facts stand out. The exchange ratio of 2.5 : 1 is based on the exchange of shares between the acquiring and acquired firm on their relative current market prices. This ratio implies that Firm A will issue 1 share for every 2.5 shares of Firm B. The

EPS has increased from Rs. 5.0 (pre-merger) to Rs. 6.25 (post-merger). The post-merger market price of the share would be higher at Rs. 6.25 × 10 (P/E ratio) = Rs. 62.50.

When the exchange ratio is 1 : 1, it implies that the shareholders of the Firm B demand a heavy premium per share (Rs. 30 in this case). The EPS and the market price per share remain constant. Therefore the tolerable exchange ratio for merger of Firm A and B is 1 : 1. Thus, it may be generalised that the maximum and minimum exchange ratio in merger situations should lie between the ratio of market price of shares of two firms and 1 : 1 ratio. The exchange ratio eventually negotiate/agreed upon would determine the extent of merger gains to be shared between the shareholders of two firms. This ratio would depend on the relative bargaining position of the two firms and the market reaction to the merger move is given below:

APPORTIONMENT OF MERGERS GAINS BETWEEN THE SHAREHOLDERS OF FIRMS A AND B

(I)	Total market value of the merged firm	Rs. 75,00,000
	Less market value of the pre-merged firms:	
	Firm A Rs. 50,00,000	
	Firm B Rs. 10,00,000	15,00,000
	Total merger gains	15,00,000
(II)	(1) Apportionment of gains (assuming exchange ratio of 2.5 : 1	
	Firm A: Post-merger market value (1,00,000 shares × Rs. 62.50)	62,50,000
	Less pre-merger market value	50,00,000
	Gains for shareholders of Firm A	12,50,000
	Firm B: Post-merger market value (20,000 shares × Rs. 62.50)	12,50,000
	Less pre-merger market value	10,00,000
	Gain for shareholders of Firm B	2,50,000

(2) Assuming exchange ratio of 1 : 1	
Firm A: Post-merger market value (1,00,000 × Rs. 50.00)	50,00,000
Less pre-merger market value	50,00,000
Gain for shareholders of Firm A	Nil
Firm B: Post-merger market value (50,000 × Rs. 50.00)	25,00,000
Less pre-merger market value	10,00,000
Gains for shareholders of Firm B	15,00,000

Debt and Preference Shares Financing: From the foregoing it is clear that financing of mergers and acquisitions with equity shares is advantageous both to the acquiring firm and the acquired firm when the P/E ratio is high. Since, however, some firms may have a relatively lower P/E ratio as also the requirement of some investors might be different, the other types of securities, in conjunction with/in lieu of equity shares, may be used for the purpose.

In an attempt to tailor a security to the requirement of investors who seek dividend/interest income in contrast to capital appreciation/growth, convertible debentures and preference shares might be used to finance merger. The use of such sources of financing has several advantages, namely, (i) potential earning dilution may be partially minimised by issuing a convertible security. For example, suppose the current market price of the shares of an acquiring company is Rs. 50 and the value of the acquired firm is Rs. 50,00,000. If the merger proposal is to be financed with equity, 1,00,000 additional shares will be required to be issued. Alternatively, convertible debentures of the face value of Rs. 100 with conversion ratio of 1.8, which would imply conversion value of Rs. 90 (Rs. 50 × 1.8) may be issued. To raise the required Rs. 50,00,000, 50,000 debentures convertible into 90,000 equity shares would be issued. Thus, the number of shares to be issued would be reduced by

10,000, thereby reducing the dilution in EPS that could ultimately result, if convertible security in place of equity shares was not resorted to; (ii) A convertible issue might serve the income objective of the shareholders of target firm without changing the dividend policy of the acquiring firm; (iii) convertible security represents a possible way of lowering the voting power of the target company; (iv) convertible security may appear more attractive to the acquired firm as it combines the protection of fixed security with the growth potential of ordinary shares.

In brief, fixed income securities are compatible with the needs and purpose of mergers and acquisitions. The need for changing the financing leverage and for a variety of securities is partly resolved by the use of senior securities.

Deferred Payment Plan: Under this method, the acquiring firm, besides making initial payment, also undertakes to make additional payment in future years to the target firm in the event of the former being able to increase earnings consequent also known as earn-out plan. There are several advantages of adopting such a plan to the acquiring firm: (i) It emerges to be an appropriate outlet for adjusting the difference between the amount of shares the acquiring firm is willing to issue and the amount the target firm is agreeable to accept for the business; (ii) in view of the fact that fewer number of shares will be issued at the time of acquisition, the acquiring firm will be able to report higher EPS immediately; (iii) there is built-in cushion/protection to the acquiring firm as the total payment is not made at the time of acquisition; it is contingent to the realisation of the potential/projected earnings after merger.

There are various types of deferred payment plan in vogue. The arrangement eventually agreed upon depends on the imagination of the management of the two firms involved. One of the often-used plans for

the purpose is base-period earn-out. Under this plan the shareholders of the target firm are to receive additional shares for a specified number of future years, if the firm is able to improve its earnings vis-à-vis the earnings of the base period (the earnings in the previous year before the acquisition). The amount becoming due for payment in shares in future years will primarily be a function of excess earnings, price-earnings ratio and the market price of the share of the acquiring firm. The basis for determining the required number of shares to be issued is

$$\frac{\text{Excess earnings} \times \text{P/E ratio}}{\text{Share price (acqiring firm)}}$$

To conclude, the deferred-plan technique provides a useful means by which the acquiring firm can eliminate part of the guess-work involved in purchasing a firm. In essence, it allows the merging management the privilege of hindsight.

Tender Offer: An alternative approach to acquire another firm is the tender offer. A tender offer, as a method of acquiring firms, involves a bid by the acquiring firm for controlling interest in the acquired firm. The essence of this approach is that the purchaser approaches the shareholders of the firm rather than the management to encourage them to sell their shares generally at a premium over the current market price.

Since the tender offer is a direct appeal to the shareholders, prior approval of the management of the target firm is not required. In case, the management of the target firm does not agree with the merger move, a number of defensive tactics can be used to counter tender offers. These defensive tactics include WHITE KNIGHTS and PAC-MANS. A white knight is a company that comes to the rescue of a firm that is being targeted for a takeover. Such a company makes its own tender offer at a higher price. Under Pac-mans form of tender offer, the firm under attack becomes the attacker.

As a form of acquiring firms, the tender offer has certain advantages and disadvantages. The disadvantages are: (i) If the target firm's management attempts to block it, the cost of executing offer may increase substantially; (ii) the purchasing company may fail to acquire a sufficient number of shares to meet the objective of controlling the firm. The major advantages of acquisition through tender offer include: (i) if the offer is not blocked, it may be less expensive than the normal route of acquiring a company. This is so because it permits control by purchasing a smaller proportion of the firm's shares; (ii) the fairness of the purchase price is not questionable as each shareholder individually agrees to part with his shares at the negotiated price.

Merger as a Capital Budgeting Decision: Like a capital budgeting decision, merger decision requires comparison between the expected benefits (measured in terms of the present value of expected benefits/cash inflows (CFAT) from the merger) with the cost of the acquisition of the target firm. The acquisition costs include the payment made to the target firm's shareholders, payment to discharge the external liabilities of the acquired firm less cash proceeds expected to the realised by the acquiring firm from the sale of certain asset (s) of the target firm. The decision criterion is 'to go for the merger' if Net Present Value (NPV) is positive; the decision would be 'against the merger' in the event of the NPV being negative.

1.5.1 Financial problems after merger and acquisition

After merger and consolidation the companies face a number of financial problems. The liquidity of the companies has to be established afresh. The merging and consolidating companies pursue their own financial policies when they are working independently. A number of adjustments are required to be made in financial planning and policies so that consolidated efforts may enable to improve short-term and long-term

finances of the companies. Some of the financial problems of merging and consolidating companies are discussed as follows:

Cash Management: The liquidity problem is the usual problem faced by acquiring companies. Before merger and consolidation, the companies had their own methods of payments, cash behaviour patterns and arrangements with financial institutions. The cash pattern will have to be adjusted according to the present needs of the business.

Credit Policy: The credit policies of the companies are unified so that same terms and conditions may be applied to the customers. If the market areas of the companies are different, then same old policies may be followed. The problem will arise only when operating areas of the companies are the same and same credit policy will have to be pursued.

Financial Planning: The companies may be following different financial plans before merger and consolidation. The methods of budgeting and financial controls may also be different. After merger and consolidation, a unified financial planning is followed. The divergent financial controls will be unified to suit the needs of the acquiring concerns.

Dividend Policy: The companies may be following different policies for paying dividend. The stockholders will be expecting higher rates of dividend after merger and consolidation on the belief that financial position and earning capacity has increased after combining the resources of the companies. This is a ticklish problem and management will have to devise an acceptable pay-out policy. In the earlier stages of merger and consolidation it may be difficult to maintain even the old rates of dividend.

Depreciation Policy: The companies follow different depreciation policies. The methods of depreciation, the rates of depreciation, and the

amounts to be taken to revenue accounts will be different. After merger and consolidation the first thing to be decided will be about the depreciable and non-depreciable assets. The second will be about the rates of depreciation. Different assets will be in different stages of use and appropriate amounts of depreciation should be decided.

1.5.2 Capital structure after merger and consolidation

The acquiring company in case of merger and the new company in case of consolidation takes over assets and liabilities of the merging companies and new shares are issued in lieu of the old. The capital structure is bound to be affected by new changes. The capital structure should be properly balanced so as to avoid complications at a later stage.

A significant shift may be in the debt-equity balance. The acquiring company will be requiring cash for making the payments. If it does not have sufficient cash then it will have to give new securities for purposes of an exchange. In all cases the balance of debt and equity will change. The possibility is that equity may be increased more than the debt.

The mergers and consolidations result into the combining of profits of concerned companies. The increase in profitability will reduce risks and uncertainties. It will affect the earnings per share. The investors will be favourably inclined towards the securities of the company. The expectancy of dividend declarations in the future will also have a positive effect. If merging companies had different pay-out policies, then shareholders of one company will experience a change in dividend rate. The overall effect on earnings will be favourable because the increased size of business will experience a number of economies in costs and marketing which will increase profits of the company.

The capital structure should be adjusted according to the present needs and requirements. The concern might sell its unrelated business, and consolidate its remaining businesses as a balanced portfolio.

1.6 REGULATIONS OF MERGERS AND TAKEOVERS IN INDIA

Mergers and acquisitions may degenerate into the exploitation of shareholders, particularly minority shareholders. They may also stifle competition and encourage monopoly and monopolistic corporate behaviour. Therefore, most countries have legal framework to regulate the merger and acquisition activities. In India, mergers and acquisitions are regulated through the provision of the Companies Act, 1956, the Monopolies and Restrictive Trade Practice (MRTP) Act, 1969, the Foreign Exchange Regulation Act (FERA), 1973, the Income Tax Act, 1961, and the Securities and Controls (Regulations) Act, 1956. The Securities and Exchange Board of India (SEBI) has issued guidelines to regulate mergers, acquisitions and takeovers.

Legal measures against takeovers

The Companies Act restricts an individual or a company or a group of individuals from acquiring shares, together with the shares held earlier, in a public company to 25 per cent of the total paid-up capital. Also, the Central Government needs to be intimated whenever such holding exceeds 10 per cent of the subscribed capital. The Companies Act also provides for the approval of shareholders and the Central Government when a company, by itself or in association of an individual or individuals purchases shares of another company in excess of its specified limit. The approval of the Central Government is necessary if such investment exceeds 10 per cent of the subscribed capital of another

company. These are precautionary measures against the takeover of public limited companies.

Refusal to register the transfer of shares

In order to defuse situation of hostile takeover attempts, companies have been given power to refuse to register the transfer of shares. If this is done, a company must inform the transferee and the transferor within 60 days. A refusal to register transfer is permitted if:

- A legal requirement relating to the transfer of shares have not be complied with; or
- The transfer is in contravention of the law; or
- The transfer is prohibited by a court order; or
- The transfer is not in the interests of the company and the public.

Protection of minority shareholders' interests

In a takeover bid, the interests of all shareholders should be protected without a prejudice to genuine takeovers. It would be unfair if the same high price is not offered to all the shareholders of prospective acquired company. The large shareholders (including financial institutions, banks and individuals) may get most of the benefits because of their accessibility to the brokers and the takeover dealmakers. Before the small shareholders know about the proposal, it may be too late for them. The Companies Act provides that a purchaser can force the minority shareholder to sell their shares if:

- The offer has been made to the shareholders of the company;
- The offer has been approved by at least 90 per cent of the shareholders of the company whose transfer is involved, within 4 months of making the offer; and

- The minority shareholders have been intimated within 2 months from the expiry of 4 months referred above.

If the purchaser is already in possession of more than 90 per cent of the aggregate value of all the shares of the company, the transfer of the shares of minority shareholders is possible if:

- The purchaser offers the same terms to all shareholders and
- The tenders who approve the transfer, besides holding at least 90 per cent of the value of shares, should also form at least 75 per cent of the total holders of shares.

1.7 SEBI GUIDELINES FOR TAKEOVERS

The salient features of some of the important guidelines as follows:

Disclosure of share acquisition/holding: Any person who acquires 5% or 10% or 14% shares or voting rights of the target company, should disclose of his holdings at every stage to the target company and the Stock Exchanges within 2 days of acquisition or receipt of intimation of allotment of shares.

Any person who holds more than]5% but less than 75% shares or voting rights of target company, and who purchases or sells shares aggregating to 2% or more shall within 2 days disclose such purchase or sale along with the aggregate of his shareholding to the target company and the Stock Exchanges.

Any person who holds more than 15% shares or voting rights of target company and a promoter and person having control over the target company, shall within 21 days from the financial year ending March 31 as well as the record date fixed for the purpose of dividend declaration, disclose every year his aggregate shareholding to the target company.

Public announcement and open offer: An acquirer who intends to acquire shares which along with his existing shareholding would entitle him to exercise] 5% or more voting rights, can acquire such additional shares only after making a public announcement to acquire at least additional 20% of the voting capita] of target company from the shareholders through an open offer.

An acquirer who holds 15% or more but less than 75% of shares or voting rights of a target company, can acquire such additional shares as would entitle him to exercise more than 5% of the voting rights in any financial year ending March 31 only after making a public announcement to acquire at least additional 20% shares of target company from the shareholders through an open offer.

An acquirer, who holds 75% shares or voting rights of a target company, can acquire further shares or voting rights only after making a public announcement to acquire at least additional 20% shares of target company from the shareholders through an open offer.

Offer price: The acquirer is required to ensure that all the relevant parameters are taken into consideration while determining the offer price and that justification for the same is disclosed in the letter of offer. The relevant parameters are:

- Negotiated price under the agreement which triggered the open offer.
- Price paid by the acquirer for acquisition, if any, including by way of allotment in a public or rights or preferential issue during the twenty six week period prior to the date of public announcement, whichever is higher.
- The average of the weekly high and low of the closing prices of the shares of the target company as quoted on the stock exchange where the shares of the company are most

frequently traded during the twenty six weeks or the average of the daily high and low prices of the shares as quoted on the stock exchange where the shares of the company are most frequently traded during the two weeks preceding the date of public announcement, whichever is higher.

In case the shares of Target Company are not frequently traded then parameters based on the fundamentals of the company such as return on net worth of the company, book value per share, EPS etc. are required to be considered and disclosed.

Disclosure: The offer should disclose the detailed terms of the offer, identity of the offerer, details of the offerer's existing holdings in the offeree company etc. and the information should be made available to all the shareholders at the same time and in the same manner.

Offer document: The offer document should contain the offer's financial information, its intention to continue the offeree company's business and to make major change and long-term commercial justification for the offer.

The objectives of the Companies Act and the guidelines for takeover are to ensure full disclosure about the mergers and takeovers and to protect the interests of the shareholders, particularly the small shareholders. The main thrust is that public authorities should be notified within two days.

In a nutshell, an individual or company can continue to purchase the shares without making an offer to other shareholders until the shareholding exceeds 10 per cent. Once the offer is made to other shareholders, the offer price should not be less than the weekly average price in the past 6 months or the negotiated price.

1.8 SUMMARY

Corporate restructuring refers to changes in ownership, business mix, assets mix and alliances with a motive to increase the value of shareholders. The economic considerations in terms of motives and effect of business combinations are similar but the legal procedures involved are different. A merger refers to a combination of two or more companies into one company. One or more companies may merge with an existing company or they may merge to form a new company. Mergers may be of three types (i) horizontal, (ii) vertical and (iii) conglomerate merger. The advantages of merger are economics of scale, synergy, strategic benefits, tax benefits and utilisation of surplus funds. The process of financial evaluation begins with determining the value of the target firm. The different approaches may be undertaken to assess the value of the target firm namely valuation based on assets, earnings, dividend, cash flows etc. After the value of a firm has been determined the next step is the choice of the method of payment to the acquired firm. The payment take the form of either cash or securities i.e., ordinary shares, convertible securities, deferred payment plans and tender offers.

1.9 KEYWORDS

Merger: A merger is said to occur when two or more companies combine into one company. One or more companies may merge with an existing company or they may merge to form a new company.

Absorption: A combination of two or more companies into an existing company.

Acquisition: Acquisition may be defined as an act of acquiring effective control over assets or management of a company by another company without any combination of businesses.

Takeover: Unwilling acquisition is called takeover.

Synergy: Synergy refers to benefits other than those related to economies of scale.

Lever aged Buy-outs (LBO): An acquisition of a company in which the acquisition is substantially financed through debt.

Spin-off: When a company creates a new firm from the existing entity.

Self-off: Selling a part of business to a third party is called sell-off.

1.10 SELF ASSESSMENT QUESTIONS

1. What do you understand by mergers? Explain the different types of mergers.
2. Discuss various methods of valuation at the time of merger and consolidation.
3. Discuss the legal and procedural aspects of a merger.
4. Elaborate the various forms of financing a merger.
5. Describe the financial problems faced by the concerns after mergers and consolidation.
6. What do you mean by tender offer? Explain the provisions relating to tender offer.

1.11 SUGGESTED READINGS

1. I.M. Pandey, “Financial Management”, Vikas Publishing House Pvt. Ltd., Ninth Edition.

2. Prasanna Chandra, “Fundamentals of Financial Management”, Tata McGraw Hill Ltd., 2006.

3. Breaby and Myers, “The principles of Corporate Finance”, 6th edition, Tata McGraw Hill, New Delhi.

4. Damodaran, Aswath, “Corporate Finance”, john Willey and Sons, New York, 2nd edition, 2005.

5. R.P. Rustogi, “Financial Analysis and Financial Management, Sultan Chand and Sons.

6. R.K. Sharma, Shashi K Gupta, “Management Accounting”, Kalyani Publishers.

7. M.Y. Khan, “Fundamental of Financial Management”, Tata McGraw Hill, New Delhi.

8. SEBI Guidelines, Regulation and Rules.

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Lesson No.: 2

PROJECTED PROFIT AND LOSS ACCOUNT AND BALANCE SHEET

STRUCTURE

2.0 Objective

2.1 Introduction

2.2 Projected Profit and Loss Account

2.3 Projected Balance Sheet

2.4 Evaluation of Projected Financial Statements

2.5 Summary

2.6 Keywords

2.7 Self Assessment Questions

2.8 Suggested Readings

2.0 OBJECTIVE

After reading this lesson, you should be able to:

(a) Prepare the Projected Profit and Loss Account and Projected Balance Sheet.

(b) Make an evaluation of projected financial statements.

2.1 INTRODUCTION

Projected financial statements are another type of financial

budget which can be used in the short-term financial planning of a firm. These statement are compiled from the projections made particularly in the operating budgets and show the end results of the budget operation. A cash budget reveals the expected cash position of an enterprise while projected financial statements give information as to the future assets, liabilities and revenue and expenses items. The analysis of the present financial statements indicates the direction of change in the financial position and performance of the enterprise. The future can be to follow the past direction or to change it. The preparation of the projected financial statements compels management to look ahead and balance its policies and activities. The projected financial statements of a firm may include:

(a) Projected Income Statement

(b) Projected Balance Sheet

The data and information for preparing these statements is provided primarily by different budgets for the period and the financial statements for the preceding period. The financial statements for the proceeding period provide the basic structure and the starting point A variety of assumptions may also be made wherever necessary. No rigid set of rules exists for the these projected financial statements, since considerable judgement and common sense is necessary to balance the degree of accuracy required on the one hand and the efforts and the time involved on the other.

2.2 PROJECTED PROFIT AND LOSS ACCOUNT

Projected profit and loss account or income statement is

concerned with the profitability of the concern for the budget period. This follows generally accepted accounting principles in matching expected expenses against expected revenues to show the operating profit for the period. The form of projected income statement should correspond to that which the firm uses in its regular financial report to facilitate the review process at a later stage. There are two commonly used methods for preparing the projected profit and loss account namely, the percent of sales method, and the budgeted expense method.

Percent of Sales method

The percent of sales method for preparing the projected profit and loss account is fairly simple. Basically, this method assumes that the future relationship between various elements of costs to sales will be similar to their historical relationship. When using this method, a decision has to be taken about which historical cost ratios to be used: Should these ratios pertain to the previous year, or the average of two or more previous years?

Table 2.1 illustrates the application of the percent of sales method of preparing the projected profit and loss account of Spaceage Electronics for the year 2006. In this table, historical data are given for two previous years, 2004 and 2005. For projection purposes, a ratio based on the average of two previous years has been used. The forecast value of each item is obtained as the product of the estimated sales and the average percent of sales ratio applicable to that item. For example, the average percent of sales ratio for cost of goods sold is 65.0 percent. Multiplying the estimated sales of 1400 by 65.0 percent, the projected value of cost of goods sold has been

calculated. Although, in practice, some deviation from a mechanical application of this method is unavoidable, for the sake of illustration, the projections shows in table 1 are based on a strict application of this method, except for dividends and retained earnings. Remember that the distribution of earnings between dividends and retained earnings reflects a managerial policy which is not easily expressible in mechanistic terms.

Table-2.1 Projected Profit and Loss Account for Spaceage Electronics for 2006 Based on Percent of Sales Method

	Historical data			Projected Profit and Loss account of 2006 assuming sales of 1400
	2004	2005	Average percent of sales	
Net Sales	1200	1280	100.0	1400.0
Cost of goods sold	775	837	65.0	910.0
Gross profit	425	443	35.0	490.0
Selling expenses	25	27	2.1	29.4
General and administration expenses	53	54	4.3	60.2
Depreciation	75	80	6.3	88.2
Operating profit	272	282	22.3	312.2
Non-operating surplus/deficit	30	32	2.5	35.0
Profit before interest and tax	302	314	24.8	347.2
Interest on bank borrowings	60	65	5.0	70.0
Interest on debentures	58	60	4.8	67.2
Profit before tax	184	189	15.0	210.0
Tax	82	90	6.9	96.6
Profit aster tax	102	99	8.1	113.4
Dividends	60	63		
Retained earnings	42	36		

Budgeted Expense Method

The percent of sales method, though simple, is too rigid and mechanistic. For deriving the projected profit and loss account

shown in Table 2.1 we assumed that all elements of costs and expenses bore a strictly proportional relationship to sales. The budgeted expense method, on the other hand, calls for estimating the value of each item on the basis of expected developments in the future period for which the projected profit and loss account is being prepared. Obviously, this method required greater effort on the part of management because it calls for defining likely developments.

A Combination Method

It appears that a combination of the two methods described above often works best. For certain items, which have a fairly stable relationship with sales, the percent of sales method is quite adequate. For other items, where future is likely to be very different from the past, the budgeted expense method, which calls for managerial assessment of expected future developments, is eminently suitable. A combination method of this kind is neither overly simplistic as the percent of sales method nor unduly onerous as the budgeted expense method.

Table 2.2 presents the 2006 projected profit and loss account for Spaceage Electronics, constructed by using a combination of the percent of sales and the budgeted expense methods. Cost of good sold, selling expenses, and interest on bank borrowings are assumed to change proportionally with sales, the proportions being the average of the two preceding years. All the remaining items have been budgeted on some specific basis.

Table-2.2 Projected Profit and Loss Account for Spaceage Electronics for 2006 Using the Combination Method

	Historical data		Average percent of sales	Projected profit and loss account of 2006
	2004	2005		
Net Sales	1200	1280	100.0	1400.0
Cost of goods sold	775	837	65.0	910.0
Gross profit	425	443	35.0	490.0
Selling expenses	25	27	2.1	29.4
General and administration	53	54	Budgeted	56.0
Depreciation	75	80	Budgeted	85.0
Operating Profit	272	282	@	319.6
Non-operating surplus/deficit	30	32	2.5	35.0
Profit before interest and tax	302	314	@	354.6
Interest on bank borrowings	60	65	5.0	70.0
Interest on debentures	58	60	Budgeted	65.0
Profit before tax	184	189	@	219.0
Tax	82	90	Budgeted	90.0
Profit after tax	102	99	@	129.6
Dividends	60	63	Budgeted	70.0
Retained earnings	42	36	@	9.6

@ These items are obtained using accounting identities.

However the following steps needs consideration to prepare projected income statement:

- The sales forecast or the sales budget.
- The income statement of the preceding period and the identification of those items which varies directly with the sales.
- Identification of those items of income statement which are

independent of the sales e.g. fixed expenses, depreciation.

- The dividend policy for the budget period.

Illustration 1: The following is the income statement of Nikhil Ltd. for the year ending Dec. 31, 2004. Prepare the projected income statement for the year 2005 given that the sales have been forecasted to increase by 10% during the year 2005 and the dividends will be maintained at the same level.

Income statement for the year 2004

	Amount (Rs.)
Sale	3,00,000
Less Cost of Goods Sold	2,15,000
Gross Profit	85,000
Less Depreciation	10,000
Less Operating Expenses	40,000
Profit before interest and Taxes (PBIT)	35,000
Less interest	6,000
Profit before tax (PBT)	29,000
Less Taxes @ 40%	11,600
Profit after Tax	17,400
Less Dividend paid	4,000
Retained Earnings	13,400

Solution

Projected Income Statement for the year 2005

	Amount (Rs.)
Sales (forecast)	3,30,000
Less Cost of Goods Sold (71.67%)	2,36,510
Gross Profit	93,490

Less Depreciation	10,000
Less Operating Expenses (13.33%)	43,990
Profit before Interest and Taxes (PBIT)	39,500
Less Interest	6,000
Profit before Tax (PBT)	33,500
Less Tax @ 40%	13,400
Profit after Tax	20,100
Less Dividend Paid	4,000
Retained Earnings	16,100

Working Notes:

(a) Sales for the year 2005: Since the sales have been forecasted for the year 2005 to increase by 10%, so the sales would be Rs. 3,30,000.

(b) The percentage of cost of goods sold and operating expenses have been calculated the basis of the relevant figures given in the income statement for the year 2004 as follows:

(i) Cost of goods sold as a percentage of sales:

$$\frac{\text{Cost of goods sold}}{\text{Sales}} X100 = \frac{\text{Rs. 2,15,000}}{\text{Rs. 3,00,000}} x100 = 71.6\%$$

(ii) Operating Expenses as a percentage of sales:

$$\frac{\text{Operating Expenses}}{\text{Sales}} X100 = \frac{\text{Rs. 40,000}}{\text{Rs. 3,00,000}} x100 = 13.33\%$$

(c) **Assumptions:** The projected income statement has been prepared on the assumption that the operating expenses will continue to bear the same ratio as they had during the year 2004. Further that the depreciation charge and the interest charge are taken at the same level under the assumption that the firms is

operating at full capacity and has no plans to install new machinery during 2005. The straight line method of depreciation has been used. In case the firm charges depreciation on the basis of some other methods, say 10% WDV, then the depreciation charge in the projected income statement would be Rs. 9,000 only. Similarly, the interest charge is also taken unchanged as the increase in sales by 10% may not necessitate the increase in borrowed funds. However, if the information is given otherwise, then the interest expenses may be changed accordingly. The tax rate is also assumed to be same at 40% for the year 2005.

2.3 PROJECTED BALANCE SHEET

Projected Balance sheet shows the budgeted assets, liabilities and owners equity and may also show additional financing requirements needed to support the planned budget. It helps the finance manager to ascertain the extent to which the firm's financial position will be strengthened or weakened as a result of the firm's planned activities during the budget period.

The required information for its preparation may be obtained from the following sources:

1. The Sales budget
2. The projected income statement
3. The income statement and balance sheet for the preceding period
4. Any other source

The projected balance sheet can be prepared by either of the following approaches :

1. Percentage of Sales Approach

The percentage of sales approach of preparing projected balance sheet is fairly simple. Basically this method assumes that the future relationship between sales to different assets and liabilities will be similar to the historical relationship. When using this method, a decision has to be taken about their historical cost ratios to be used, that is, should these ratios pertain to the previous year or the coverage of two or more previous years?

Illustration 2 : To continue with the figures given in illustration 1, the following is the balance sheet of Nikhil Ltd. As on Dec. 31,2004:

Balance Sheet as on Dec. 31, 2004

(Figures in Rs.)

Liabilities	**Amount**	**Assets**	**Amount**
Share Capital	40,000	Fixed Assets	75,000
Retained Earnings	35,000	Cash	18,000
Long term debts	60,000	Stock	21,500
Creditors	7,167	Debtors	35,000
Other current liabilities	7,333		
	1,49,500		1,49,500

On the basis of the past experience it is known that stock, debtors and the creditors vary directly with the sales. Draw the projected balance sheet on the basis of percentage of sales method.

Solution

Projected Balance Sheet as on Dec. 31, 2005

(Percentage of Sales Method)

Liabilities	**Amount**	**Assets**	**Amount**
Share Capital	40,000	Fixed Assets	65,000
Retained Earnings (35,000+16,100)	51,100	(75000-10000)	
		Cash	18,000
Long-term debts	60,000	Stock	
Creditors	7,884	Debtors	23,650
Other current liabilities	7,333	Marketable securities	38,500
	1,66,317	(Bal. Fig.)	21,167
			1,66,317

Working Notes:

(a) As the stock, debtors and the creditors vary directly with the change in sales, their relationship with sales, therefore, should be established on the basis of the income statement and the balance sheet for the year 2004 as follows:

(i) Stock as on Dec. 31, 2004 Rs. 21,500

Cost of goods sold during 2004 Rs. 2,15,000

Therefore, closing stock is 10% of the cost of goods sold.

(ii) Debtors as on Dec. 31, 2004 Rs. 35,000

Total Sales during 2004 Rs. 3,00,000

Average monthly sales during 2004 Rs. 25,000

(Rs. 3,00,000 ÷12)

Average age of debtors

(Rs. 35,000 ÷ Rs. 25,000) 1.4 months

(iii) Creditors as on Dec.31, 2004 Rs. 7,167

Total purchases during 2004 Rs.3,00,000

Average monthly purchase during 2004 Rs.17,917

(Rs. 2,15,000 ÷ 12)

Average age of Creditors

(Rs. 7,167 ÷ Rs. 17,917) 0.4 months

(b) Now, on the basis of these relationships the relevant figures for the year 2005 may be ascertained as follows:

(i) Projected Sales for the year 2005 Rs. 3,30,000

(ii) Projected cost of goods sold Rs. 2,36,510

(iii) Closing Stock on Dec. 31, 2005 Rs. 23,650

(10% of Rs. 2,36,510)

(iv) Debtors as on Dec. 31,2005 Rs. 38,500

(Rs. 3,30,000 ÷ 12) X 1.4

(i) Creditors as on Dec. 31, 2005 Rs. 7,884

(Rs. 2,36,510 ÷ 12) X 0.4

(a) The other items of the balance sheet i.e. the fixed assets, cash, share capital and long term debts are independent of the sales, and therefore, are expected to remain unchanged during 2005.

(b) The retained earnings will increase by the amount of retained earnings of the current year i.e. Rs. 16,100.

(c) The balancing figure of the balance sheet i.e. Rs. 21,167 on the

assets side has been taken as marketable securities.

The balance sheet under the percentage of the sales method is prepared on the basis of the accounting equation that the value of total assets must be equal to the total liabilities and the shareholders funds. In the above case, the estimated assets of the firm are less than the total of estimated liabilities and shareholders funds. Therefore, the balancing figure of Rs. 21,167 has been taken as investment of the firm in marketable securities. It may also be taken as increase in cash balance of the firm. This balance figure indicates that firm's spontaneous and retained earnings financing is in excess of its needs and therefore, the firm can use these funds either for short term investments or even for repaying debts. In the other situation, if the total assets are more than the total liabilities, then this indicates the fact that the firm has to arrange additional funds either by increasing capital or long-term debts or short term borrowings. The percentage of sales approach to the preparation of projected balance sheet provides a rough approximation of the projected balance sheet. However, a more detailed projected balance sheet based on specific and detailed assumption and estimate can be prepared by the judgement approach.

2. **Judgment Method:** The judgment method of preparation of projected balance sheet can be considered as an extension of the percentage of sales method discussed above. In the judgment method, some of the balance sheet items are estimated by the judgment value while others items may be calculated on the basis of sales etc. In order to adopt the judgement method, different subjective assumptions may have to be made. The following example illustrates the judgment method of preparation of projected balance sheet:

Illustration 3: To continue with the figure given in illustration 2, the following assumptions may be made to prepare the projected balance sheet at the end of the year 2005:

1. A minimum cash balance of Rs. 5,000 is desired at the end of the year.
2. Average debtors will be same as in the year 2004
3. During January, 2005 a new plant worth Rs. 50,000 will be acquired. The rate of depreciation application to this asset is 20% WDV.
4. The creditors may reduce to Rs. 7,000 and the other current liabilities are be Rs. 6,000 only.
5. The firm's long-term debts and equity share capital is expected to remain same at Rs. 60,000 and 40,000 respectively since the firm has no plan to issue or redeem these sources.
6. The retained earning will increase by the amount of retained profits projected by the projected income statement. Prepare the projected balance sheet as on Dec. 31,2005.

Solution

On the basis of the assumptions made the projected balance sheet may be drawn at follows:

Projected Balance Sheet as on Dec.31, 2005

(Judgement Method)

(Figures in Rs.)

Liabilities	**Amount**	**Assets**	**Amount**
Share Capital	40,000	Fixed Assets	1,05,000
Retained Earnings (15,000 + (16,100-10,000)	41,100	(75,000 + 50,000-10,000-10,000)	
Long term debts	60,000	Cash	5,000
Creditors	7,000	Stock	22,000
Other current liabilities	6,000	Debtors	35,000
Additional Funds (Bal.Fig.)	12,900		
	1,67,000		1,67,000

It may be noted that the different figures shown in the projected balance sheet are either given or are unchanged from the preceding year. An amount of Rs. 10,000 is to be provided as deprecation on the new asset. This amount has been deducted out of the current year profit as well as out of book value of fixed assets. The balancing figure of Rs. 12,900 (on the liability side) is the amount which the firm will be required to raise from external sources. Due to the nature of the judgement method, the balance sheet is expected to match without some sort of a balancing figure. The balancing figure on the liabilities side represents the amount of additional funds needed to allow the firm to meet its financing needs in the current year.

A projected balance sheet prepared either on the basis of percentages of sales method or judgement method may give a

balancing figure (unless a very detailed information is available and each and every figure of the balance sheet can be calculated). This balancing figure may be known as a positive balancing figure (when value of expected liabilities is less than the level of assets desired and it represents the additional financial required), or a negative balancing figure (when the value of total assets is less than the total of expected liabilities and it represents a surplus of funds which the firm can use to make short term investments or to reduce its liabilities).

Both the percentage of sales method and the judgement method for the preparation of projected balance sheet are simplified attempts and are based on determining the desired effects and developing a balance sheet on the basis of these effects.

1.4 EVALUATION OF PROJECTED FINANCIAL STATEMENTS

Projected financial statements, as a tool of financial planning and control, help in visualizing the shape of the financial statements for the budget period. In addition to estimation of additional financial requirements in the budget period to support the budgeted sales, the projected financial statements also provide a basis for analysing in advance the overall profitability and financial performance of the firm. The advantages of projected financial statements are as follows:

1. The projected financial statements make explicit forecast of profit, dividend, funds needs etc.
2. The finance manager can compare the actual figures for the year with the budgeted figures to find out the extent to which the objective have been attained. Such comparison will also identify

the points where the performance has significantly deviated from the plans.

3. Using the projected financial statements, the financial analyst as well as a lender can analyze the sources and uses of funds during the budget period. These sources and uses can be evaluated by preparing a Projected Statement of Change in Financial Position, and
4. Various ratios can be calculated from the projected income statement and projected balance sheet to evaluate the performance.

Thus, the projected financial statements are of key importance in solidifying the firm's financial plans for the budget period. However, the projected financial statements also suffer from certain shortcomings as follows:

(a) The projected financial statements are based on the assumption that the past financial statements are accurate predictor of future performance. Further, the historical relationship between sales and other variables may not remain same during the budget period.

(b) Another assumption that the value of certain items of the balance sheet can be taken as the desired level is also questionable.

(c) A sales forecast is a must for a preparation of the projected financial statements. Therefore, the projected financial statements will be subject to the accuracy of the sales forecast.

Illustration 4

You are required to make a financial projection i.e., Projected Income Statement and Projected Balance Sheet for the year 2005-06 on the basis of the following limited information available for the year 2004-05.

Sales	Rs. 10 Crores
Expected growth rate	40%
Net Profit margin	20%
Dividend payout ratio	40%
Tax rate	50%

BALANCE SHEET AS ON 31.3.2005

(Rs. in Lacs)

Liabilities	**Amt.**	**Assets**	**Amt.**
Share Capital	175	Fixed Assets	400
Retained Earnings	150	Current Assets	470
Loans and Liabilities	545		
	870		870

What will be the Dividend rate on the basis of above Dividend payout ratio?

You may make necessary assumptions.

Solution:

PROJECTED INCOME STATEMENT FOR THE YEAR 2005-06

(Rs. in Lacs)

Sales (40% growth rate)	1400
Profit before tax	560
Less : Tax at 50%	280

Profit after tax (at 20% of sales)	280
Less : Dividend (40% payout)	112
Retained Earnings	168

PROJECTED BALANCE SHEET AS ON 31.3.2006

(Rs. in Lacs)

Sources of Funds :	
Share capital	175
Retained Earnings (150+168)	318
Total	493
Application of Fund :	
Fixed Assets (Cost less Dep.) (I)	400
Current assets, Loan and advances:	
Cash and Bank Balances	310
Other current asset (470+188)	658
Advance payment of tax	280
Total (A)	1248
Less: Current liabilities and provisions:	
Loans and liabilities	763
Proposed dividend	112
Provision for tax	280
Total (B)	1155
Net Working Capital (A – B) (II)	93
Total (I + II)	493

Working Notes:

1. It is assumed that expected growth rate of 40% is applicable on Sales, Current Assets and Current Liabilities; and not on Share Capital and Fixed Assets.

2. Sales for the year 2005-06 can be ascertained by taking 40% growth rate on sales i.e. 1000 lacs x 140% = Rs. 1400 lacs.

3. Net profit margin is stated to be 20%.

Therefore, profit after tax will be 20% of Rs. 1400 lacs i.e. Rs. 280 lacs.

Since the tax rate is 50%, the profit before tax will be two times that of Profit after tax. Therefore, profit before tax would be Rs. 560 lacs.

4. Dividend Pay out = 40% of PAT

= 40% of 280 lacs = 112 lacs.

5. Consumption of cash and bank balances:

(Rs. in Lacs)

Profit before Interest and Tax	560	
Add: Increase in creditors (40% growth)	218	778
Less (I) Increase in current assets (40% growth other than cash)	188	
(ii) Advance payment of tax	280	468
Increase in cash and bank balances		310

6. In the absence of any information as to depreciation rate, the fixed assets has been stated at the book value as shown in the balance sheet as on 31.3.2005.

2.5 SUMMARY

Planning is the basic function of management. It helps in determining the course of action to be followed for achieving the organisational goals. It is decision in advance: what to do, when to do, how to do and who will do a particular task. Plans are framed

to achieve better results. The finance manager is responsible for planning to ensure that the firm has enough funds for its needs. A useful tool for short-term financial planning of a firm is projected financial statements. The projected financial statement represent what the income statement and the balance sheet of a firm would look like at the end of the budget period if all the budget estimates are met and achieved. For the preparation of projected financial statements, the data and information is provided primarily by the different budgets for the period and the financial statements for the preceding period. Projected income statement for a budget period summarises the performance of a firm if it meets the budget projections of sale production and expenses. Projected Balance Sheet helps the finance managers to ascertain the extent to which the firm's financial position will be strengthened or weakened as a result of the firm's planned activities during the budget period.

2.6 KEYWORDS

Projected Financial Statements: It represents what the income statement and the balance sheet of the firm would look like at the end of the budget period if all the budget estimates are met and achieved.

Projected Income Statement: It summaries the performance of a firm for a budget period if it meets the budget projection of sales, production and expenses.

Projected Balance Sheet: This depicts the estimated financial position of the firm at the end of the budget period.

2.7 SELF ASSESSMENT QUESTIONS

1. What are projected financial statements? Which of the two projected financial statements, income statement and balance sheet be prepared first, and why ?
2. Discuss and explain the different methods of preparing projected income statement.
3. Explain the various methods of preparing projected balance sheet.
4. What are the advantage and limitations of projected financial statements?
5. Following is the summarized balance sheet of the Progressive Corporation Ltd. as on 31st December, 1998.

Liabilities	Rs.	Assets	Rs.
Share Capital	8,00,000	Fixed Assets	4,48,000
Reserve	11,84,000	Stock	11,52,000
Bank Overdraft	5,76,000	Debtors	16,00,000
Trade Creditors	6,40,000		
	32,00,000		32,00,000

Trade creditors are equal to the last month's purchases and debtors are equal to the last two months' sales. For the half-year ending 31.12.1998 sales amounted to Rs. 50,42,000 and Gross Profit earned at a uniform rate was Rs. 1,08,000.

The following estimates and informations are available:

i) With effect from 1.1.1999 goods purchased will cost 25% higher and sale-price will be increased by 20%.

ii) Sales and purchases are spread evenly throughout the year.

iii) Credit terms for purchases and sales will remain unchanged.

iv) Value of closing stock on 30.6.1999 is expected to be 10% higher than on 31.12.1998.

v) All expenses will be paid within the month in which they accrue and are estimated at Rs. 64,000 per month.

vi) No fixed assets are proposed to be acquired or sold during the period.

You are required to prepare Projected balance sheet of the Progressive Corporation Ltd. for the half-year ending 30.6.1999.

6. Following is the summarized Balance Sheet of Bharat Steel Works Ltd. as on 31st march, 1998.

BALANCE SHEET OF BHARAT STEEL WORKS LTD.

As on 31st March, 1998.

Liabilities	Rs.	Assets	Rs.
Share Capital	24,00,000	Fixed Assets	10,00,000
Profit & Loss A/c	1,60,000	Stock	9,00,000
Sundry Creditors	5,00,000	Sundry Debtors	5,00,000
		Cash and bank balance	6,60,000
	30,60,000		30,60,000

The management makes the following estimates for the year

ending 31st March, 1999.

1. Purchase up to February, 1999-Rs. 30,40,000; and during March, 1999-Rs. 2,10,000.
2. Sales up to February, 1999-Rs. 44,80,000; and during March, 1999-Rs. 5,00,000.
3. Management decided to invest Rs. 3,00,000 in purchase of fixed assets which are depreciated at 10%.
4. The time lag for payment to creditors and receipts from debtors is one month.
5. The business earns a Gross Profit of 33-1/3% on turnover. Sundry expenses against Gross Profit will amount to 12% of the turnover excluding depreciation on fixed assets.

Prepare a Projected Balance Sheet of the company for the year ending 31st March, 1999.

2.8 SUGGESTED READINGS

1. Cost and Management Accounting by Ravi M. Kishore.
2. Financial Management and Policy by J.C. Vanhorne.
3. Management Accounting by I.M. Panday.
4. Management Accounting and Financial Management by S.N. Maheshwari.

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Lesson 3

INDUSTRIAL SICKNESS

STRUCTURE

3.0 Objectives

3.1 Introduction

3.2 Definition of Sick Industrial Company

3.3 Causes of Industrial Sickness

3.4 Reasons for Business Failure

3.5 Working Capital Management in Sick Industries

3.6 Detection of Incipient Sickness

3.7 Prediction of Sickness

3.8 Diagnostic Study in Revival of Sick Unit

3.9 Revival and Rehabilitation of Sick Industrial Companies

3.10 Theme of Action of the Schemes Sanctioned by BIFR

3.11 Indicative List of Concessions and Sacrifies by Different Agencies

3.12 Summary

3.13 Keywords

3.14 Self Assessment Questions

3.15 Further Readings

3.0 OBJECTIVES

After reading this lesson, you should be able to:

(a) Define a sick industrial company and explain the causes of industrial sickness.

(b) List out the reasons for business failure.

(c) Describe the importance of working capital management in

sick industries.

(d) Predict the industrial sickness through ratio analysis, univarite models, Z score and Argenti score.

(e) Explain the legal provisions as to revival and rehabilitation of Sick Industrial Companies.

(f) Describe the theme of actions taken by BIFR.

(g) Draw a list of concessions and sacrifices by different agencies.

3.1 INTRODUCTION

Many objectives have been imputed to the corporate entity but perhaps the most important is that of survival. To survive, a firm needs to be profitable and financially sound. Shareholders, employees, financial institutions, suppliers, customers and the society as a whole experience the consequences of failure. In all economies, business failure is a reality of commercial life. World-over sickness in industries is a recognised fact. Often, it is inevitable for various reasons. The vast strides made in technological development render old technologies obsolete, industrial recessions make some unviable, international trade policies make some uncompetitive and tardy progress in some related sectors shrink markets for others. These features are generally combated by closing down unviable units, adopting new technologies, diversifying products, nursing a few that are victims of trade cycles till recoveries set in and revive those that are sustainable with appropriate measures. A sick unit incurs cash losses and fails to generate internal surplus on a continuing basis. There are different forms, varieties and degrees of industrial sickness. Various authorities have viewed industrial sickness

differently but in sense and substance their findings are more or less the same.

3.2 DEFINITION OF SICK INDUSTRIAL COMPANY

The definition given under the provisions of the Companies Act, 1956 and the definitions given by Reserve Bank of India are as follows:

The Companies Act, 1956 defined 'Sick Industrial Company' and 'Net Worth' as follows:

'Sick Industrial Company' means an industrial company which has:

(a) the accumulated losses in any financial year equal to fifty per cent or more of its average net worth during four years immediately preceding such financial year, or

(b) failed to repay its debts within any three consecutive quarters on demand made in writing for its repayment by a creditor or creditors of such company.

Section 2 (46AA)

'Net worth' means the sum total of the paid up capital and free reserves after deducting the provisions or expenses as may be prescribed.

Section 2 (29A)

Explanation: For the purpose of this clause 'free reserves' means all reserves created out of the profits and share premium account but does not include reserves created out of revaluation of assets, write back of depreciation provision and amalgamation.

RBI's Definition

Sick Industrial Company: Sick industrial company means an industrial company (being a company registered for not less than

five years) which has at the end of any financial year accumulated losses equal to or exceeding its entire net worth.

Potentially Sick Industrial Company: If the accumulated losses of an industrial company as at the end of any financial year have resulted in the erosion of fifty per cent or more of its peak net-worth during the immediately preceding four financial years.

Weak Unit: An industrial unit is defined as 'weak' if its accumulated losses as at the end of any financial year resulted in the erosion of 50% or more of its peak net worth in the immediately preceding four accounting years. Weak units as defined above will, not only include those which fall under SICA (viz. sick Industrial companies Act) but also other categories such as partnership firms, proprietary concerns, etc. Thus a weak industrial company should be termed as a potentially sick company as and when the bank reports which companies to BIFR in terms of SICA.

3.3 CAUSES OF INDUSTRIAL SICKNESS

Factually, no single factor is responsible for this growing malady of industrial sickness. The following causes will generally lead to industrial sickness:

(a) Internal Causes

The following internal causes may lead to sickness of an industrial unit:

1. PLANNING AND IMPLEMENTATION STAGE

(i) Technical Feasibility

- Inadequate technical know-how
- Locational disadvantage
- Outdated production process

(ii) Economic Viability

- High cost of inputs

- Break-even point being too high
- Uneconomic size of project
- Under-estimation of financial requirements
- Unduly large investment in fixed assets
- Over-estimation of demand
- Cost over runs resulting from delays in getting licenses/sanctions etc.
- Inadequate mobilisation of finance

2. COMMERCIAL PRODUCTION STAGE

(i) Production Management

- Inappropriate product-mix
- Poor quality control
- Poor capacity utilisation
- High cost of production
- Poor inventory management
- Inadequate maintenance and replacement
- Lack of timely and adequate modernisation
- High wastage of resources

(ii) Financial Management

- Poor resource management and financial planning
- Faulty costing
- Liberal dividend policy
- General financial indiscipline and application of funds for unauthorised purposes
- Deficiency of funds
- Over-trading
- Unfavourable gearing or keeping adverse debt-equity ratio
- Inadequate working capital
- Absence of cost consciousness

- Lack of effective collection machinery

(iii Labour Management

- Excessively high wage structure
- Inefficient handling of labour problem
- Excessive manpower
- Poor labour productivity
- Poor labour relations
- Lack of trained/skilled labour or technically competent personnel

(iv) Marketing Management

- Dependence on a single customer or a limited number of customers
- Dependence on single or a limited number of products
- Poor sales realisation
- Defective pricing policy
- Booking of large order at fixed prices in an inflationary market
- Weak market organisation
- Lack of market feedback and market research
- Lack of knowledge of marketing techniques
- Unscrupulous sales/purchase practices

(v) Administrative Management

- Over centralisation
- Lack of professionalism
- Lack of feed back to management
- Lack of proper management information systems
- Lack of controls
- Lack of timely diversification
- Excessive expenditure of R&D

- Divided loyalties
- Dissension within management
- Incompetent management
- Dishonest management

(b) External Causes

The external factors that cause industrial sickness are as given below:

(i) Infrastructural Bottlenecks

- Non-availability of irregular supply of critical raw materials or other inputs.
- Chronic power shortage
- Transport bottlenecks

(ii) Financial Bottlenecks

- Non-availability of adequate finance at the right time

(iii) Government Controls

- Government price controls
- Fiscal duties
- Abrupt changes in Government policies affecting costs/prices/imports/exports/licensing.
- Procedural delays on the part of the financial/licensing/other controlling or regulating authorities

(iv) Market Constraints

- Market saturation
- Technological obsolescence
- Recession-fall in domestic/export demand

(v) Extraneous Factors

- Natural calamities
- Adverse Political situation (domestic as well as international)

- Sympathetic strikes
- Multiplicity of labor unions
- War

3.4 REASONS FOR BUSINESS FAILURE

At one level, a company either ceases to trade because the bank or creditors stop it or voluntarily ceases to trade and calls in the receivers or the administrators. In either case, action is taken because the firm is unable to pay its debts or likely to be unable to pay in the near future. Why do firms get into this situation? The accounts of the company do not cause it to go broke. Rather, accounting information reveals what has gone wrong and there are two levels of cause (i) the accounting manifestation (ii) the root problem.

Accounting Manifestation of Failure

- Too much working capital
- Insufficient working capital
- Too high interest charges
- Too much debt
- Over and high dividends
- No cash
- Making a trading loss
- No growth
- Selling parts of the firm at a loss
- Very poor profit margins
- Marginal profitability

No one of these on its own is a cause of collapse, but when several appear together, the danger signs are there.

Root Problems for Failure

- Not selling enough

- Not selling at the right prices
- Lack of modernization
- No product development or research
- Buying useless assets
- Failure to controls costs
- Failure to control working capital
- Reckless borrowing
- Having a defective dividend policy

Perhaps, to these should be added a failure to invest in people. These things do not happen all at the same time, but if the trends are observed over two or three years then it is often easy to identify trouble brewing unless management does something drastic and takes corrective action. The RBI has also studied the cause-wise reasons for industrial sickness of 378 units and has concluded the following:

Causes	**Number**	**Percentage**
Mismanagement	197	52
Faulty planning and technical drawbacks	52	14
Market Recession	86	23
Shortage of power, material, materials inputs etc.	34	9
Labour trouble/unrest	9	2
	378	100

1.5 WORKING CAPITAL MANAGEMENT IN SICK INDUSTRIES

The industrial sickness is caused due to numerous internal and external factors. But the sickness caused may also be attributed to the poor working capital management like:

- Poor financial planning

- Poor resource management
- Faulty costing
- Use of working capital funds for purpose of capital expenditure
- Overtrading, over capitalisation or under capitalisation
- Inadequate working capital
- Prolonged operating cycle
- Inefficiency in collection of receivables
- Lack of effective collection machinery
- Excessive holding of stocks
- Stoppage of production due to stock-outs
- Excessive reliance on trade credit
- Bank finance not available in-time

The planning and control of working capital in sick industries need special attention. A thorough analysis of causes for sickness is required for working capital management in sick industry. The Finance Manager require to take steps to restructure the working capital requirements and the banks may be approached for need based finance instead of operating on the basis of predetermined credit limits given by the bank. The efforts should be made to improve current ratio and quick ratio by reducing the levels of investment in stocks and receivable. The financial restructuring should be done to improve the leverage ratios.

1.6 DETECTION OF INCIPIENT SICKNESS

The sickness creeps into the industrial unit in a gradual and slow moving process. If the incipient sickness is not detected in its early stages, it becomes chronic over a period of time and ultimately ends-up with closure of the unit, in terms of insolvency. The management is required to recognise the symptoms of sickness and

set it right immediately to avoid the embracing financial situation in the future, as well as, to save the unit from permanent closure. If necessary the management should engage the services of specialists for proper diagnosis of the situation. A planned course of action with co-ordination and co-operation of all functions and staff can enable to counter the sickness. If necessary, the real situation should be put before the stakeholders like Shareholders, Banks, Financial institutions, Government, Creditors etc. to bring the operation to the smooth-flow. The incipient sickness can be identified and detected with the help of analysing the following situations:

- The company is continuously making cash losses year after year and the trend is likely to continue in future.
- The working capital is totally insufficient to carry the day-to-day operations.
- The company is working under the situation of negative working capital.
- The operating cycle and cash conversion cycle is too long, affecting the profitability of the organisation.
- The company is working at very low levels of capacity utilisation.
- The operational costs are very high as compared to sales revenue realisation.
- Too much reliance on outside funds, increases the interest burden, as well as, financial risk.
- There is gradual deterioration of debt-equity ratio over a period of time.
- Gradual deterioration of net worth and the situation is likely to continue in future.

- The working capital is diverted to purchase capital assets.
- The company caught in a situation of overtrading i.e. the working capital is insufficient to meet the requirements of increased level of sales activity.
- The current ratio, quick ratio and absolute liquid ratio give an indication of technical solvency over a period of time.
- The managerial imcompetency is unable to counter the competitive forces and their strategies.
- Excess capacity created leads to increase in costs and reduction of profits.

In view of the grave consequences of industrial sickness, an early planned programme is required to remove the incipient sickness.

1.7 PREDICTION OF SICKNESS

The prediction of sickness can be made with the help of the following:

1. Ratio Analysis

Banks and financial institutions have so far provided huge amount of credit to sick industrial undertakings of the country and still the sick account portfolio of the financing agencies is steadily mounting up. Industrial sickness has multiple effects including gross under utilisation of productive facilities, longer working capital cycle, failure to maintain delivery schedule leading to cancellation of orders, failure to maintain repayment schedule for term loans, failure to retain good managers and technocrats, failure to retain and maintain assets and machinery. All these factors result in increase and further mounting of losses. The problems are much more grave in case of SSI units where entrepreneurs are mostly first generation industrialists with their financial liquidity often sent out on capital cost over-run. First of all, the analysts should

see whether the three important parameters viz., cash position, net working capital and net worth of the company are positive. If not, they should monitor the following cashflow related variables and improve the overall financial position of the company. The cashflow represents the 'earnings before depreciation and tax (EBDT).'

(a) EBDT to Total Assets – This ratio is a measure of the true productivity of the company's assets. In indicates how effectively the resources of a company are being deployed in its assets. This ratio also reveals the cash generating capacity of the assets. The survival of a company depends directly on the earning power of its assets. Thus, it ensures the long-term survival of the company. A smaller cashflow to total assets ratio of the company is claimed to provide forewarning of financial crisis in the future. A higher cashflow to total assets ratio shows signs of stronger financial health of a company.

(b) EBDT to Total Liabilities – This ratio measures the company's capacity to withstand financial pressure and shows the long-term solvency position of the company. A low ratio value provides insight into the impending sickness of the company. A high ratio value reflects the company's strength to meet its obligation as they mature.

(c) EBDT to Net Sales – The operating efficiency of the company in generating cash flow business can be known by establishing relationship between the cashflow to net sales. This ratio relates the resource inflow to the amount of sales effected. Since the basic aim of business is to generate cash through sales, it can indicate its internal cash generation ability.

(d) EBDT to Net Worth – Cashflow when related to net worth would depict to what extent the company has utilised the owner's

fund and this ratio helps to evaluate the financial solvency of a company in terms of its ability to avoid financial risk. A lower value of this ratio would indicate less cash generation and a negative ratio over a period of time would lead to failure of business. A higher trend of this ratio indicates more inflow of cash and contributes to net worth position of the company which is a sign of efficiency.

(e) EBDT to Current Assets – This ratio provides insight into the company's ability to manage the working capital as well as its credit policy on sales. The value of inventories assumes greater significance in prediction of corporate health, especially where a large portion of the current assets of the company are in the form of inventories. In such cases, even the company may fail inspite of the strong liquidity position.

(f) EBDT to Current Liabilities – This ratio indicates the short-term solvency position of a company. It shows the liquidity position in the sense that whether the company is capable enough to meet current obligations when they are due. Greater the EBDT to current liabilities, the more likelihood of the company to be classified as a non-ailing one or vice versa.

(g) EBDT to Total Capital – This ratio provides information about how effectively and efficiently the capital (owners and outsiders) is being utilised to generate cash for operational purposes. This ratio also provides pertinent information on the ability of the company to pay regular interest, dividend etc. A high ratio reveals efficient utilisation of the capital, whereas a low ratio is a sign of sickness.

The above ratios do possess both the discriminating as well as predictive power. It can discriminate between sick and non-sick companies and can predict the potential corporate sickness at high

degree of accuracy when ratios are used on individual basis. While taking important decisions, the banks, financial institutions, management, government, investors etc. can utilise the above ratios to study and monitor the health status of the companies.

Illustration 1

Which accounting ratio will be useful in indicating the following symptoms:

(1) Low capacity utilisation.

(2) Falling demand for the product in the market.

(3) Inability to pay interest.

(4) Borrowings for short-term and investing in long-term assets.

(5) Large inventory accumulation in anticipation of price rises in future.

(6) Inefficient collection of debtors.

(7) Inability to pay dues to financial institutions.

(8) Return of shareholders' funds being much higher than the overall return on investment.

(9) Liquidity crisis.

(10) Increase in average credit period to maintain sales in view of falling demand.

Solution

Symptoms	**Accounting Ratio to be used**
1. Low capacity utilisation	1. Actual hours/budgeted hours or Fixed Assets Turnover Ratio
2. Falling demand for the product in the market.	2. Finished Goods Turnover Ratio
3. Inability to pay interest	3. Interest Coverage Ratio
4. Borrowing for short-term and investing in long-term assets	4. Current Ratio or Fixed assets to Long-term Loans Ratio.
5. Large inventory accumulation in anticipation of price rise in future.	5. Inventory Turnover Ratio
6. Inefficient collection of debtors.	6. Debtors Turnover Ratio.
7. Inability to pay dues to financial institutions.	7. Debt service coverage ratio

8. Return of shareholders' funds being much higher than the overall return on investment.	8. Debt-Equity Ratio, Return on Investment and Return on Equity compared.
9. Liquidity crisis	9. Current Ratio, Quick Assets or Acid Test Ratio
10. Increase in average credit period to maintain sales in view of falling demand.	10. Average collection period or Debtors Turnover Ratio.

2. Univariate Models

Beaver (1966) tested groups of ratios covering cash flow, net income, gearing, liquidity and turnover. His research indicated that 'Cashflow to Total debt' was the best predictor. In a later study Beaver carried out a more detailed analysis of the liquidity ratios and their potential as predictors of business failure. On the basis of his study, he made the following generalisations about failing firms:

- They generate less sales and the sales growth is less than that of non-failed firms.
- They have less current assets but more current debt.
- They have less inventory than non-failed firms.

His data showed that the 'Net working capital and Quick asset ratios' predicted better than the 'Current assets ratio'. The 'Cash ratio' predicted best of all.

FitzPatrik (1974) examined companies that failed in the 1920's and found the best ratio to be 'Net profits to Net worth'. Smith (1974) came up with 'Working capital to Total assets' as the best indicator of failure. Merwin (1974) also found Smith's ratio to be the best.

3. Multiple Discriminant Analysis – Altman Z Score

The computation and analysis of certain ratios based on the information taken from financial statements allow the analyst to predict sickness or business failure. But the ratios are considered independent of each other, will not permit to express the whole

situation in a single measure. Therefore, it would be more useful if the important ratios are combined together to measure the probability of sickness or insolvency. To overcome this difficulty multiple discriminant analysis is used.

Edward I. Altman (1968) developed Z score model in order to detect the financial health of industrial units with a view to prevent the industrial sickness. The model was developed based on emphirical studies, to predict the sickness of a unit in advance. The model is also called as 'Multiple Discriminant Analysis (MDA)'. It is a linear analysis used to develop with five variables. The MDA computes the discriminant co-efficient while the independent variables are the actual values taken from the financial statements. Altman Z score model is expressed as under:

$$Z = 1.2\ X_1 + 1.4\ X_2 + 3.3\ X_3 + 0.6\ X_4 + 1.0\ X_5$$

Where,

X_1 = Working capital/Total assets

X_2 = Retained earnings/Total assets

X_3 = Earnings before interest and taxes/Total assets

X_4 = Market value of equity/Book value of total debt

X_5 = Sales/Total assets

Z score model can be analysed as follows:

- Sickness is predicted basing on value of Z
- If Z score is more than 2.99 – there is no danger of bankruptcy.
- If Z score is below 1.81 – there is a definite failure.
- If Z score is between 1.81 and 2.99 – it shows the grey area.

Altman developed a guideline for Z score.

- If score is above 2.675 – firms can be classified as financially sound.

- If score is below 2.675 – the firm is heading towards bankruptcy.

Therefore, the lower the Z score, there is a greater possibility of bankruptcy and vice versa.

Altman's model has established itself as the leading multivative predictor model of corporate failure and it has been the subject of numerous tests around the world. It would be useful to employ the Altman model in evaluating Indian firms and endeavour to establish the reliability of the model. It could be that the cut-off point for the Z score should be altered from that established in the original study.

4. Non-Financial Indicators of Business Failure – Argenti score

The following theories attempt to explain the reasons for failure. Agrenti (1976) after analysing the factors associated with the collapse of Rolls Royce, gave six causes of failure which are as follows:

(a) Bad management structure
(b) Lack of accountancy information
(c) Not responding appropriately to change
(d) Over-trading
(e) Involvement with a big project
(f) High gearing

Argenti has stressed on non-financial indicators for assessment of symptoms of failure. According to him we must have an intimate knowledge of the company and especially its top management. The failure of business organisation is seen as the culmination of sequence starting with management defects that bring mistakes, which in turn produce symptoms and their scores are presented in table given. The various scores presented in Argenti score board

must be used in full or not at all. Intermediate or partial scores are not permitted. The philosophy behind the use of the Argenti score is that if a company is in trouble, then that is due to management defects and the consequent mistakes, which will have been there for a number of years and should be noticed by a careful observer long before the signs of financial distress are there. The Argenti score thus attempts to quantify a qualitative judgement. It is, therefore, highly subjective and the observer needs to visit the company and its factories, meet its directors and get to know them well, in order to make objective analysis. This table presents the weighting given by Argenti to the various aspects of management performance in order to assess a company's viability. Note that the higher score, the worse to the company.

Score	**(a) Defects**
	In Management
8	- The Chief executive is an autocrat.
4	- He is also the chairman.
2	- Passive Board – an autocrat will see to that.
2	- Unbalanced Board – too many engineers or too many finance types.
2	- Weak Finance Director
1	- Poor management depth.
	In Accountancy
3	- No budgets or budgetary controls to assess variances
3	- No cash flow plans or ones that are not updated.
4	- No costing system, cost and contribution of each product unknown.

15	- Poor response to change, old fashion products, obsolete factory, old directors, out of data marketing.
43	Total Defects (Pass 10)
	(b) Mistakes
15	- High leverage, firm could get into trouble by a stroke of bad luck.
15	- Over trading, Company expanding faster than its funding. Capital base too small or unbalanced for the size and type of business.
15	- Big project gone wrong or any obligation which they cannot meet if something goes wrong.
45	Total Mistakes (Pass 15)
	(c) Symptoms
5	- Financial signs, such as Z-score, appears near failure time.
16	– Creative accounting Chief executive is the first to see signs to failure and in an attempt to hide it from creditors and the banks, accounts are 'glassed over' by, for instance, over valuing stocks, using lower depreciation etc. Skilled observers can spot these things.
3	- Non-financial signs, such as untidy offices, frozen salaries. Chief executive ill, high staff turnover, low morale, rumors.
1	- Terminal signs
12	Total symptoms
100	Total Possible Score (Pass 25)

After an extensive analysis of a large number of American companies, both successful and unsuccessful, Ross and Kami (1973) up with a list of ten basic principles of management which, if followed, should avoid failure. The ten principles are as follows:

- Develop and communicate a strategy.
- A unified sense of direction to which all members of the organisation relate.
- If you want to achieve plans, programmes and policies, then overall controls and costs controls must be established.
- Exercise care in the selection of a Board of Directors and require that they actively participate in management.
- Avoid one-man rule.
- Provide management depth.
- Keep informed of change and react to change.
- Don't overlook the customer and the customer's new power.
- Use but don't misuse computers.
- Do not engage in accounting manipulations.
- Provide for an organisational structure that meets the needs of people.

3.8 DIAGNOSTIC STUDY IN REVIVAL OF SICK UNIT

Any successful scheme for revival will start with a diagnostic study or preparation of revival scheme. This involves identifying four 'Rs' – Reasons, Rationale, Risks and Requirements. These are briefly discussed as under:

(a) Reasons for sickness – The real reasons should be identified first. Very often, one may be guided by apparent reasons than real reasons. Just as a wrong diagnosis does not help during disease of a man, it may not serve any purpose in reviving the industrial

health. Thus, misdirected efforts and resources arising from wrong diagnosis should be avoided.

(**b) Rationale for revival –** What is the rationale for revival? Establishing justification for revival is very important. This will help identification of viable and non-viable units. In reality, the number of viable units would be very low (5% to 10% of the sick units).

(c) Risks – The risks inherent in the revival should be evaluated. It may be emphasised that reviving a sick unit is more risky than launching a new project. Revival operation of a sick unit, even if found to be potentially viable, is an onerous task.

(d) Requirements – The requirements in terms of resources, technology, government help, management efficiency, productivity etc. should be listed down. In spite of potential viability, a revival scheme may fail if there is any mismatch between requirements and their availability.

After the diagnostic study, one should prioritise the thrust areas, as well as, management skills and approaches needed for successful revival operations.

3.9 REVIVAL AND REHABILITATION OF SICK INDUSTRIAL COMPANIES

Previously the sick industrial companies were under the regulation of 'Board for Industrial and Financial Reconstruction' (BIFR) established under 'The Sick Industrial Companies (special provisions) Act, 1985, which is now repealed. Now the Companies Act, 1956, through an amendment made in the year 2002, inserted Sections 424A to 424L regarding revival and rehabilitation of sick industrial companies. Brief provisions of the Act are discussed below:

Reference to Tribunal - When an industrial company becomes sick, the Board of Directors of the company is required make a reference to the National Company Law Tribunal. The Board of Directors of the company is required to prepare and submit a 'scheme of revival and rehabilitation' to the Tribunal along with application. If there is sufficient reason exists, Central Government, State Government, RBI, Public Financial Institutions or Scheduled Bank are empowered to make reference to the Tribunal. A certificate from an auditor, from a panel of auditors, is to submit along with the application explaining the reasons for erosion of net worth of the company being 50% or less. The auditor certificate is also required to give details about default in repayment of debts, making such company a sick industrial company. In case of Government companies, before making any such reference prior approval of the concerned Central or State Government is required. On receipt of reference, the Tribunal will pass an order whether the company become sick or not and such order shall be final for further proceedings.

Inquiry into Working of Sick Industrial Company – On receipt of reference, the Tribunal makes inquiry into industrial company, for determining whether it becomes a sick industrial company. Tribunal may also require by order any operating agency to enquire into the scheme for revival and to make a report to it on such matter as may be specified in the order. Operating agency means any group of experts consisting of persons having special knowledge of business or industry in which the sick industrial company is engaged. The operating agency also includes public financial institution, state level institution, scheduled bank or any other person as may be specified as operating agency by the

Tribunal. The Tribunal may appoint one or more persons who possess knowledge, experience and expertise in management and control of the affairs of any other company to be a Special Directors on the board of industrial company for the purpose of enquiry.

Power to Make Suitable Order – After making an inquiry and after taking into consideration all the relevant facts and circumstances of the case, the Tribunal will decide in writing whether it is practicable for the company to make its net worth exceed the accumulated losses or make the repayment of its debts within a reasonable time. If it is practicable to revive within reasonable time, Tribunal will pass an order in writing with such restrictions or conditions as it may deem fit for revival.

Preparation and Sanction of Scheme – As specified in the Tribunal's order, operating agency is required to prepare and submit the scheme within 60 days from the date of Tribunal's order which may be extended upto 90 days after taking into consideration the guidelines framed by the RBI in this regard. The scheme may contain any one or more of the following measures:

(a) Financial reconstruction.
(b) Proper management by change in management or by takeover of management.
(c) Amalgamation with any other company.
(d) Amalgamation of any other company with the sick industrial company.
(e) Sale or lease of a part or whole of any industrial undertaking of sick industrial company.
(f) Rationalisation of managerial personnel, supervisory staff and workmen in accordance with law.

(g) Such other preventive, ameliorative and remedial measures as may be appropriate.

(h) Repayment of debt.

(i) Such incidental, consequential or supplemental measures to give effect to the above measures.

The scheme may provide any one or more of the following:

- The constitution, name and registered office, the capital, assets, powers, rights, interests, authorities and privileges, duties and obligations of sick industrial company and the transferee company.
- The business, properties, assets and liabilities to be transferred by sick industrial company to the transferee company and terms and conditions of transfer.
- Any change in the Board of directors, appointment of new Board of directors, their authority, period of appointment etc.
- Alteration of Memorandum of Association of sick industrial company and the transferee company for the purpose of altering capital structure, and to carryout the reconstruction or amalgamation.
- Continuation of any action or other legal proceedings.
- Reduction of interest or rights of shareholders.
- Allotment of shares and in case of dissentient shareholders, payment of cash in full satisfaction of their claims.
- Any other terms and conditions for the reconstruction or amalgamation.
- Sale of undertaking free from all encumbrances and all liabilities of the company.

- Sale of undertaking with such other encumbrances and liabilities as may be specified.
- Sale or lease to any person including a co-operative society formed by the employees of such undertaking.
- Fixing of reserve price for sale.
- Method of sale of assets of the industrial undertaking such as by public auction, by inviting tenders or in any other manner.
- The manner of publicity for sale of assets.
- Issue of shares at face value or at intrinsic value which may be at discount value or such other specified value to any industrial company or any person including the executives and employees of such sick industrial company.
- Such other measures for carrying out the scheme fully and effectively.

Arrangement for Continuing Operations During Inquiry - Any person providing or intending to provide any financial assistance may make an application to the Tribunal, at any time before completion of the inquiry, for continuing the operations.

Winding up of Sick Industrial Company – If the Tribunal is of the opinion that sick industrial company is not likely to make its networth exceed the accumulated losses within a reasonable time, while meeting all its financial obligations, and is not likely to become viable in future, the Tribunal may order for winding up of the company.

Direction not to Dispose of Assets – The Tribunal may pass an order not to dispose of any of the assets during the period of inquiry or during the period of preparation or consideration of the

scheme. Such order may be passed in the interest of sick industrial company or creditors or shareholders or public interest.

3.10 THEME OF ACTION OF THE SCHEMES SANCTIONED BY BIFR

The gist of actions taken by BIFR under the provisions of SICA, in the previous regime, are given in brief as follows:

- Close-down the unviable sections of the company.
- Rationalisation of the work force involving voluntary retirement schemes.
- Settlement of the bank's outstanding.
- Leasing out of surplus land for development by private builders.
- Carry out essential repairs.
- Sale of liquid assets.
- Change to set up of machinery to make it compatible to the requirement of the company.
- Entering into agreement with workers to accept voluntary retirement schemes and productivity norms as applicable to industry.
- No additional demands to be made by labour which shall be detrimental to operate the scheme.
- Banks to accept charging concessional interest rates and defer the overdue interest.
- Conversion of overdue interest into funded interest and concession rates on additional working capital limits.
- To urge the Government and statutory bodies to accept payment of overdue statutory liabilities over a period of time, say five years.

- The company could also provide a scheme to repay the liabilities which could be beneficial to the creditors.
- Modernisation of the unit where necessary.
- Additional investment to be made to make the unit financially viable.
- Control working capital and follow aggressive sales policies.
- Increase in cash credit limit.
- Improve realisation from the customers.
- Economise in all directions.
- To provide for escalation formula in future contracts to take care of the increase in prices.
- Firm agreement with customers to have price settlements.

BIFR has carried out commendable jobs in the form of:

- Providing a single platform to discuss and finalise turn around plans.
- Assessing independently the viability of the sick companies.
- Directing financial institutions, banks and governments etc. to expand need based reliefs and concessions.
- Mitigate problems of litigations against sick companies and relieving sick units of suicidal contracts.
- Trying unscrupulous promoters and protecting employment while trying down labour or reasonable terms during implementation of turn-around plan.

3.11 INDICATIVE LIST OF CONCESSIONS AND SACRIFICES BY DIFFERENT AGENCIES

The list of concessions and sacrifices extended by the Central Government, State Governments, management and employees to a Sick Industrial Company under the direction of BIFR were as follows:

Central Government

- Exemption from Central excise, wholly or partly, for a period of time/deferment of collection or treating the dues as a loan repayable on the lines of sales tax loans by the State Governments.
- Income-tax relief to banks in respect of amount placed in Interest Suspense Account.
- Preferential allotment of canalised items to sick industrial units.
- Deferment of provident fund/waiver of penalties, income-tax and Employees' State Insurance dues and collection after suitable rephasing and ensuring at the same time that there is no deprivation of benefits to the retiring or sick employees.
- Exemption from payment of minimum bonus under the Payment of Bonus Act for a limited period, through the amount may continue to form a contingent liability to be discharged when the sick industrial unit is in a position to do so.
- Banks and Financial Institutions should not be asked to issue guarantee cover to the Central Government in respect of their dues, e.g., Provident fund, Income-tax, Excise duty and Import duty.
- In respect of sick public sector undertakings, or defence oriented/export oriented sick industrial units which, in spite of their non-viability, Government wants to be assisted on considerations of public interest budgetary support through equity or interest-free loans should be provided.
- Adequate marketing support should be given to sick industrial units, if necessary, by reserving a certain quota for

a certain period for purchase by Government/Semi-Government Organisations. The sick industrial units should also be given price preference in the same way as public sector industrial units, as a measure of package.

State Governments

- Sales tax loans should be provided at nil or very low rate of interest.
- State Government guarantee should be made available where needed for fresh advances.
- Power supply should not be cut unilaterally to sick industrial units when they are under a process of rehabilitation, if the electricity dues are not paid in time. A realistic rescheduling of such dues should be worked out.
- Exemption of certain concessions in the rate of sales tax/octroi duty and other duties/levies of the state/quasi government bodies should be given.
- Adequate market support for the products by strengthening the infrastructure should be provided.
- Speedier disposal of industrial disputes should be ensured. Where the rehabilitation schemes envisages rationalisation of labour, State Governments should use their good office in the matter.
- Banks and Financial Institutions should not be asked to stand guarantees for the payment of dues of the sick industrial units to the state/quasi government bodies.
- In respect of sick industrial units taken over by the State Governments, adequate budgetary support should be made to strengthen their equity base. Alternatively, State Industrial

Development Corporations and State Industrial Investment Corporations might provide the requisite support.

- Penal levies in respect of sick industrial units should be waived as a part of the package.
- Declaration of sick industrial units as 'Relief Undertakings' under the various States' Relief Undertakings Acts may be made as a matter of course. Banks and Term Lending Institutions should be exempted from the applicability of the Relief Undertaking Order.
- Price preference in the matter of purchases as given to public sector industrial units should be given.
- Expeditious permission under the Urban Land Ceiling Act, not only for creation of mortgage but also for the sale of the mortgage assets or excess vacant land to meet a part of the rehabilitation should be given.
- Equity contribution should be provided wherever necessary, even where the units are not taken over by the State Government.

Management

- Waiver or reduction of remuneration.
- Foregoing interest on any unsecured loans/deposits by self or friends and relatives.
- Write-off of loans.
- Bringing in fresh funds as may be decided under the package.
- Agreeing to reconstitution of management at the Board or Operational level.
- Agreeing to appointment of finance/commercial directors/controllers and concurrent auditors.
- Agreeing to provide personal guarantees/pledge of shares.

- Agreeing to discipline envisaged as a part of the package.

Employees

- Voluntarily agreeing to schemes of rationalization /retrenchment of surplus staff.
- Deferring or phasing out retrenchment compensation.
- Wage stabilisation, if not reduction, without agreeing on increases.
- Agreeing not to make any fresh demands for the specified period.
- Agreeing to increase productivity and productivity linked incentives.

3.12 SUMMARY

The survival and growth of an enterprise is one of the basic objectives, which cannot be ignored. To survive, a firm need to be profitable and sound. A sick unit incurs cash losses and fails to generate internal surplus on a continuing basis. The causes for sickness of an industrial unit may arise in planning stage implementation sage or commercial production stage. Some causes arises internally within the organisation due to poor management of production, finance, marketing, human resources and lack of administrative skills. The external causes generally relate to infrastructural bottlenecks, financial constraints, government control, market constraints and factors extraneous to business. The reasons for industrial sickness is due to cashflow problems. The analyst should monitor the financial position by looking the earnings before depreciation and tax with total assets, net sales, total liabilities, net worth, total capital, current assets and current liabilities. The planning and control of working capital in sick industries needs special attention and need based finance should

be sought from banks and financial institutions. Previously Board for Industrial and Financial Reconstruction undertook the rehabilitation of sick units under Sick Industrial Companies (Special Provisions) Act, 1985 which is now repeated. Revival and rehabilitation of sick units are regulated under newly inserted Sections 424A to 424L in the Companies Act, 1956. The regulatory authority is the National Company Law Tribunal.

3.13 KEYWORDS

Sick Industrial Company: It means an industrial company (being a company registered for not less than five years) which has at the end of any financial year accumulated losses equal to or exceeding its entire net worth.

Net Worth: It means the sum total of the paid up capital and free reserves after deducting the provisions or expenses.

Z Score: Z score is a model to detect the financial health of industrial units with a view to prevent the industrial sickness.

Weak Unit: An industrial unit is defined as weak if its accumulated losses as at the end of any financial year resulted in the erosion of 50% or more of its peak net worth in the immediate preceding four accounting years.

3.14 SELF ASSESSMENT QUESTIONS

1. What do you understand by Sick Industrial Company? Explain the factors causing industrial sickness.
2. Describe the symptoms which might indicate that industrial sickness lies ahead.
3. What are the ratios used for prediction of sickness?
4. Explain the Altman's Z score model in order to detect the financial health of industrial units with a view to prevent industrial sickness.

5. Discuss the legal provisions incorporated in Companies Act, 1956 for revival and rehabilitation of sick industrial companies.
6. Give a list of actions taken by BIFR in rehabilitation of sick companies.
7. Discuss the various concessions and sacrifices by different agencies under the direction of BIFR.

3.15 SUGGESTED READINGS

1. Rastogi, R.P., Financial Management, Galgotia Publishing Company, New Delhi.
2. Maheshwari, S.N., Financial Management, Sultan Chand & Sons, New Delhi.
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Lesson: **4**	Vetter:

FOREIGN EXCHANGE MARKETS

STRUCTURE

4.0 Objectives

4.1 Introduction

4.2 Quotations at the foreign exchange market

4.2.1 Direct and indirect quotes

4.2.2 Relationship between bid and ask prices of currencies

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4.0 OBJECTIVES

After going through this lesson, you will be able to

- Describe foreign exchange markets and their participants.

- Understand the structure of foreign exchange markets.
- Elaborate exchange rates including reciprocal and cross rates.
- Discuss relationship between spot market and future market.

4.1 INTRODUCTION

The foreign exchange market is the market in which currencies are bought and sold against each other. Like the money market, the foreign exchange market is a market where financial paper with a relatively short period maturity is traded. It is a non-localised market which exists in the network of information system and there is no particular place that can be called as foreign exchange market. It is the largest market in the world and over the counter market which means there is no single physical or electronic market place or an organised exchange. The market itself is actually a worldwide network of inter-bank traders, consisting primarily of banks, connected by telephone line and computers. The transactions in the foreign exchange market are derived from the transactions in the markets for commodities, services or assets among the people of two nations. The trade in the currency is the consequence of the people's wish to trade in underlying commodities, services or assets. In foreign exchange market, a party can never be the demander of one currency without being simultaneously a supplier of another. Geographically, the markets span all the time zone from New Zealand to the west coast of the United States and in this way the market functions virtually 24 hours enabling a trader to offset a position created in one market using another market. The five major centres of inter-bank currency trading, which handle more than two-thirds of all forex transactions are London, New York, Tokyo, Zurich and Frankfurt. The foreign exchange market has two segments:

(a) **Spot market**: This is the market where the transactions are conducted for the spot delivery of currencies i.e. delivery after two days the spot contract is closed.

(b) **Forward market**: In this market the forward contracts are bought and sold at forward exchange rates.

4.2 QUOTATIONS AT THE FOREIGN EXCHANGE MARKET

A quotation is the amount of a currency necessary to buy or sell a unit of another currency e.g. $ (Rs./$) = Rs. 44.75 is an outright rate between two currencies. Generally, the quotations made in the form of 'buy' and 'sell' or 'bid' and 'ask' rates. The buy/bid quote is the price at which the exchange dealer is ready to buy a currency for which the quote is made and sell/ask quote indicates the price at which the dealer is ready to sell the currency. An example of sell and buy price is:

Buying: Rs. 35.10/$ Selling: Rs. 36.35/$

4.2.1 Direct and indirect quotes

In direct quotes, a unit of foreign currency is quoted in terms of domestic currency e.g. a New York foreign exchange market the Deutche mark (DM) is quoted as

Spot (bid) = $ 2.4000/DM Spot (Ask) = $ 2.4017/DM

In case of indirect quotes, a unit of domestic currency is expressed in terms of foreign currency. For example in London Foreign Exchange Market the quotation are made as:

Spot (Bid) = $ 3.020/BP Spot (ask) = $ 3.0180/BP

4.2.2 Relationship between bid and ask prices of currencies

In case of bid and offer rate, a bank quotes for a currency and simultaneously offers another currency in lieu. For example, if a bank quotes bid rate at spot for dollars as S (Rs./bid $). It simultaneously sells rupees for dollars. In particular, if S (Rs./bid $) = Rs. 35.50/$ which is the bid price for dollar but at the same time it is the ask price for rupees in terms of dollars. The inverse of this ask rate of rupees would again the equal to the bid rate of dollar. In other words:

S (Rs./bid $) = 1/S ($/ask Rs.) and S ($/ask Rs.)

$$= \frac{1}{S\,(Rs./bid\$)}$$

This can well be seen from the above quote.

Bid rate for dollar is Rs. 35.80/$ = ask price of rupees in indirect quotes. And the direct quote would be S ($/ask Rs.) = $ (1/35.5)/Rs. = $ 0.0282/Rs.

The difference between ask and bid is known as spread.

Spread = Ask – Bid (In case of direct quote)

= Bid – Ask (In case of indirect quote)

The spread depends upon the currency being traded, the volume of currency being traded and overall perception of the dealer about the conditions of the economy and the forex markets.

4.2.3 Forward exchange rate

The exchange rates for delivery and payment at specified future dates are called forward exchange rate and is denoted by F ( ). The forward exchange rate is contracted in the present for future delivery of foreign exchange. For example, 60 days forward rate between rupees and dollar is the rate at which the foreign exchange dealer can arrange a transaction between rupees and dollars in 60 days.

Forward exchange rates are determined by forward demand and forward supply of various currencies. Forward exchange rate may be at premium or discount. A foreign currency is said to be at a forward premium if its future value exceeds its present value in terms of domestic currency and it is said to be at discount if the converse is true. For example, if the spot rate between rupees and dollar is S (Rs/$) = Rs. 44.00/$ and three month forward is F_3 (Rs./$) = 45.75/$. These rates imply that dollar is at a premium and rupees is at discount in the forward.

4.3 STRUCTURE OF FOREIGN EXCHANGE MARKET

The foreign exchange market is formed by foreign exchange dealers association and foreign exchange brokers association. Forex markets are generally located in major financial centres such as New York, Paris, Frankfurt, Zurich, Tokyo, Singapore, Hong Kong, Mumbai etc. Forex market is non-localised market and having no specific trading locations like those for securities or commodities. The following constitutes the structure of forex market:

Retail foreign exchange market: It is the market in which travellers and tourists exchange one currency for another in the form of currency notes or travellers cheques. The main features of this market

are: total turnover and average transaction size is very small; spread between buying and selling is large.

Wholesale foreign exchange market: It is also known as inter-bank market. The average transaction size is very large.

Primary price makers/professional dealers: These make a two-way market to each other and to their clients, that is, on request they will quote a two-way price– a price to buy currency X against currency Y and a price to sell X against Y– and ready to take either the buying or the selling side. This has a kind of tiering: a few giant multinational banks deal in a large number of currencies on large amount, second tier are large banks which deal in a small number of currencies and lastly there are small local institutions which make market in a very small number of major currencies against their home currency.

Secondary price makers: These are the entities which make foreign exchange prices but do not provide two way market. Secondary price makes constitute restaurants, hotels shops catering to tourists who buy foreign currencies in payments of bills. The bid-ask spreads are much larger than the primary price makes.

Foreign currency brokers: Foreign currency brokers act as middlemen between two market-makers. The main function of foreign currency brokers is to provide information to market making banks.

Price takers: Price takers are those who take the prices quoted by primary price makers and buy or sell currencies for their own purposes but do not make market. Corporations use foreign exchange markets for payments for imports, conversion of export receipts, hedging of receivable and payables, payment of interest on loan, placement of surplus funds etc.

4.4 PARTICIPANTS OF FOREIGN EXCHANGE MARKETS

The main participants of foreign exchange market and their activities are mentioned below:

Traders: Traders are those participants who use spot and forward markets to reduce/eliminate the risk of loss of value of export or import that are denominated in foreign currencies. The traders buy the foreign currencies when they import goods or machinery and sell the foreign currencies when they export goods/machinery. The objective is usually to hedge a position. The traders buy and sell currencies in spot and futures market.

Arbitrageurs: This class of participants always try to find out the differences in prices of currencies to earn risk free profits. They buy the currencies from the markets where the prices are lower and sell in the markets where the prices are higher.

Speculators: Speculators actively expose themselves to currency risk by buying and selling currencies to profit from the foreign exchange rate fluctuation.

Hedgers: Many multinational firms engage themselves in forward contract to protect the home currency values of foreign currency denominated assets and liabilities on their balance sheet that are not to be realised over the life of the contract. These companies hedge receivables and payables in foreign currencies.

Commercial banks: Commercial banks are the main participants in the foreign exchange market. Commercial banks participate in the foreign exchange market as an intermediary for their corporate customers who wish to operate in the market.

Governments: The role of governments in the foreign exchange markets for stabilizing the exchange rates is very important activity because these activities infuse confidence in the functioning of forex markets. Government regularly monitor markets and intervene for policy targets they set in for the economy.

Central banks: The central bank is often responsible for maintaining the value of the domestic currency vis-à-vis the foreign currencies. This is more true in case of 'fixed exchange rate'. In case of 'Floating Exchange Rates' the role of the control bank should be minimal unless it has certain preferences for what the foreign exchange rate should be, for example, if it wishes to protect the local export industry. Then, the control bank will try to make the domestic currency cheaper relative to those of other countries by selling its local currency as the exchange markets.

4.5 ARBITRAGE IN FOREIGN EXCHANGE MARKET

The arbitrage refers to the purchase of a currency by speculators in the markets where it is cheaper for resale in the market where it is more expensive so to make a profit. This process helps in keeping the exchange rate between any two currencies the same in different markets. For example: if the dollar price of pounds were $ 1.98 in New York and $ 2.01 in London an arbitrager would purchase pounds at $ 1.98 in New York and immediately will sell them in London for $ 2.01, this realising a profit of $ 0.03 per pound. However, as arbitrage continues, the exchange rate between the two currencies tends to get equalised in two markets. In the example mentioned above, the sale of pounds in London increases the supply of pounds there, thus resulting in a decrease in the dollar price of pounds in London. In New York, arbitrage increases the demand for pounds in New York thereby increasing the dollar price of pounds in New York. The process of arbitrage continues till the dollar prices become

equal in the countries so that arbitrage does not remain profitable. In this example only two currencies and two markets were involved so it is called two-point arbitrage. When three currencies and three monetary centres are involved, it is known as triangular or three-point arbitrage. The example for three-point arbitrage is given below:

$ 2 = £ 1 in New York

£ 0.2 = 1 DM in London

2.5 DM = $ 1 in Frankfurt

These cross rates are consistent because $ 2 = £ 1 = 5 DM and no possibility of profitable arbitrage exists. But if the dollar price of ponds was $ 1.96 in New York with other exchange rates remaining the same, then it would pay to use $ 1.96 to purchase £ 1 in New York use the £ 1 to buy 5 DM in London and exchange 5 DM in London for $ 2 in Frankfurt thus realising a $ 0.04 profit on each pound transferred. Thus, triangular arbitrage eliminates inconsistent cross rates and the profitability of further arbitrage and thus helps to unify all international monetary centres into a single market.

4.5.1 Interest Arbitrage

Interest arbitrage refers to the international flow of short-term liquid capital to earn a higher return abroad. Interest arbitrage can be covered or uncovered.

Uncovered interest arbitrage

The transfer of funds abroad to take advantage of higher interest rates in foreign monetary centres usually involves the conversion of the domestic currency into foreign currency, to make the investment. At the time of maturity, the funds are reconverted from the foreign currency to

the domestic currency. During the period of investment, a foreign exchange risk is involved due to the possible depreciation of the foreign currency. If such a foreign exchange risk is covered, we have covered interest arbitrage, otherwise we have uncovered interest arbitrage.

Suppose that the interest rate on three-month treasury bills is 11 per cent at an annual basis in Germany and 15 per cent in London. It may then pay for a German investor to exchange marks for pounds at the current spot rate and purchase British treasury bills to earn the extra 1 per cent interest for the three months. When the British treasury bills measure, the German investor may desire to exchange the pounds he invested plus the interest he earned back into marks. However, by that time, the pound may have depreciated so that he gets back fewer marks per pound than he paid. If the pound depreciates by ½ of 1 per cent during the three months of the investment, the German investor nets only about ½ of 1 per cent from his foreign investment (the extra 1 per cent interest he earns minus the ½ of 1 per cent that he loses from the depreciation of the pound). If the pound depreciates by 1 per cent during the three months, the German investor gains nothing and if the pound depreciates by more than 1 per cent, the German investor loses. However, if the pound appreciates, the German investor gains both from the extra interest he earns and from the appreciation of the pound.

Covered interest arbitrage

To avoid the foreign exchange risk mentioned, the investor exchanges the domestic currency for the foreign currency at the current spot rate so as to purchase the foreign treasury bills and at the same time he sells forward the amount of the foreign currency he is investing plus the interest he will earn so as to coincide with the maturity of his foreign investment. Thus, covered interest arbitrage refers to the spot purchase of the foreign currency to make the investment and offsetting

the simultaneous forward sale to cover the foreign exchange risk. When the treasury bills mature, the investor can then get the domestic currency equivalent of the foreign investment plus the interest earned without a foreign exchange risk. Since the currency with the higher interest rate is usually at a forward discount, the net return on the investment is roughly equal to the positive interest differential earned abroad minus the forward discount on the foreign currency. This reduction in earning is the cost of insurance against the foreign exchange risk.

Continuing with the earlier example where the interest rate on three-month treasury bills is 11 per cent per year in Germany and 15 per cent in London, let us also assume that the pound is at a three-month forward discount of 1 per cent per year. To engage in covered interest arbitrage, the German investor must exchange marks for pounds at the currency exchange rate (to purchase the British treasury bills) and at the same time sell forward a quantity of pounds equal to the amount invested plus the interest he will earn at the prevailing forward rate. Since the pound is at a forward discount of 1 per cent per year, German investor loses 1 per cent on the foreign exchange transaction to cover his foreign exchange risk for the three month period. His net gain is thus the extra 1 per cent interest he earns for the three months minus 1/4th of the 1 per cent he loses on the foreign exchange transaction, or ¾ of 1 per cent.

But as covered interest arbitrage continues, the possibility of gain reduces until it is completely wiped out. This takes place due to two reasons. First, as funds are transferred from Germany to UK, the interest rate rises in Germany due to the increase of supply of funds in UK. As a result, the positive interest differential in favour of UK reduces. Second, the sale of pounds in the forward market reduces the forward rate while the purchase of pounds in the spot market increases the spot rate. Thus

the forward discount on the pound (i.e., the positive difference between the spot rate and the forward rate) rises.

With the post-interest differential in favour of UK diminishing and the forward discount on the pound rising, the net gain falls for both reasons until it becomes zero. In this situation the pound is said to be at interest parity. Here, the positive interest differential in favour of the foreign monetary centre is equal to the forward discount on the foreign currency (both expressed on an annual basis). In the real world, a net gain of at least ¼ per cent per year is normally required to induce funds to move internationally under covered interest arbitrage.

If, instead, the pound is at a forward premium, the net gain to the German investor will equal the extra interest earned for the three months plus the forward premium on the pound for the three months. However, as covered interest arbitrage continues, the positive interest differential in favour of London diminishes and so does the forward premium on the pound until it becomes a forward discount and all of the gains are once again wiped out.

Thus, in covered interest arbitrage, the rule is that if the interest rate differential is greater than the premium or discount, place the money in the currency that has a higher rate of interest or vice versa.

4.6 SETTLEMENT OF TRANSACTIONS IN FOREIGN EXCHANGE MARKETS

The foreign exchange market is an over-the counter market in which there is no single physical or electronic market place or an organised exchange with a central trade clearing mechanism where traders meet and exchange currencies. The market itself is actually a world-wide network of inter-bank traders, consisting primarily of banks, connected by telephone lines and computers. Western markets are

developed financial markets and their settlement systems are electronically equipped. European markets settle their transactions through a satellite communication network called SWIFT (Society for Worldwide International Financial Telecommunications). The participants are linked together with telephone, telex and ultimately with SWIFT. As soon as the contracts are sold, the settlement is positioned and executed at proper time. In dollar market, the settlement is done through CHIPS (Clearing House Inter Bank Payment System). The CHIPS is located in New York and any one can enter the CHIPS through SWIFT and vice-versa. In India, all the transactions of foreign exchange are reported to RBI. The settlement is done by the Banks from their accounts held in different currencies.

4.7 SOME OTHER IMPORTANT CONCEPTS OF EXCHANGE RATES

Foreign exchange markets are mainly concerned with nominal exchange rates but for analysis purposes, the only nominal rates are not sufficient there are other concepts of foreign exchange rates which are mentioned below:

Real exchange rate (RER)

Real exchange rate of foreign exchange adjusts the inflation rate in the economies of the currencies involved. The real exchange rate is given as:

Real exchange rate = $S (Rs/\$) \times (P^{\$} \times P^{Rs})$

Wherein, S (Rs/$) = Spot nominal exchange rate; $P^{\$}$ = Price level in US; and P^{Rs} = Domestic price level.

The real exchange rate actually refers to the charge in the real purchasing power of a currency relative to its past purchasing power in relation to a foreign currency.

Nominal effective exchange rate (NEER)

This rate is used in context of export where incentives to exports are provided. When export incentive per unit is added to the nominal exchange rate then it is called nominal effective exchange rate. For example, the official rate is Rs. 25/$ and each dollar earned gets 10% subsidy from the state, then the effective exchange rate is: Nominal Exchange Rate + Per Unit Subsidy i.e. Rs. 25 + 10% of Rs. 25 = 27.5.

Real effective exchange rate (REER)

When nominal effective exchange rate is adjusted for relative prices in different countries, the real effective exchange rate is obtained.

$$REER = NEER \times (P^f \times P^d)$$

Wherein, REER = Real effective exchange rate; NEER = Nominal effective exchange rate; P^f = Foreign price level; and P^d = Domestic price level.

Equilibrium real exchange rate

It is that relative price of tradable goods to non-tradable goods that for given sustainable equilibrium values of other relevant variables such as taxes, international prices and technology results in the simultaneous attainment of internal and external equilibrium. Internal equilibrium means that the market for non-tradable goods clears. External equilibrium, on the other hand, is attained when current account is balanced.

Natural real exchange rate (NATREX)

It refers to a medium run inter cyclical equilibrium real exchange rate, determined by real and fundamental factors. The Natrex is a moving equilibrium real exchange rate responding to continual changes in exogenous and endogenous real fundamentals.

4.8 EXCHANGE RATE REGIMES AND THE FOREIGN EXCHANGE MARKET IN INDIA

4.8.1 Exchange rate regime and exchange control

The exchange rate regime in India has undergone significant changes since independence particularly during the 1990's. The following Table provides a bird's-eye view of the major changes.

Year	**Type of Change**
1949	The Rupee was devalued against the dollar by 30.5% in September.
1967	The rupee was devalued by 57.5% against the sterling on June 6.
1971	Rupee-sterling parity changed as a result of devaluation of sterling.
1971	Bretton-Woods system broke down in August. Rupee briefly pegged to the US dollar at Rs 7.50 before repegging to sterling at Rs 18.9677 with a 2.25% margin on either side.
1972	Sterling was floated on June 23. Rupee-Sterling parity revalued to Rs 18.95 and then in October to Rs 18.80
1975	Rupee pegged to an undisclosed currency basket with margins of 2.25% on either side. Intervention currency was sterling with a central rate of Rs 18.3084. Managed float.
1979	Margins around basket parity widened to 5% on each side in January.

Year	Type of Change
1991	Rupee devalued by 22% July 1 and July 3. Rupee-Dollar rate depreciated from 21.20 to 25.80. A version of dual exchange rate introduced through EXIM, scrip scheme giving exporters freely tradable import en-titlements equivalent to 30-40% of export earnings.
1992	LERMS (Liberalised Exchange Rate Management System) introduced with 40-60 dual rate, for converting export proceeds, market determined rate for all but specified imports, and market rate for approved capital transactions. US dollar became intervention currency from March 4. EXIM scrip scheme abolished.
1993	Unified market determined exchange rate introduced for all transactions. RBI would buy spot US dollars and sell US dollars for specified purposes. It will not buy or sell forward though it will enter into dollar swaps. FERA amended. Rupee characterised as "independently floating".
1994	RBI announces substantial relaxation of exchange controls for current account transactions, and a target date for moving to current account convertibility. Rupee declared current account convertible in August 1994.
1997	Committee on Capital Account Convertibility submits its report. Recommends phased removal of restrictions on capital account transactions.
1999	FEMA enacted to replace FERA.
2001	Further significant liberalisation of the capital account. Ceiling for FII holdings in a company raised. Limits for Indian companies investing abroad liberalised.

Throughout this period the RBI has administered a very complex system of exchange control. The statutory framework was provided by the

Foreign Exchange Regulation Act (FERA), of 1947, which was amended in 1973, 1974, and 1993. It has been replaced by Foreign Exchange Management Act (FEMA) of 1999. Even a summary treatment of its myriad provisions and historical evolution would require a book-length study. For further details, the interested reader should consult the latest edition of the Exchange Control Manual which is available on the RBI website, and the subsequent ex-change control announcements also available there and published in RBI's Monthly Bulletin.

The following few paragraphs taken from the RBI notifications pertaining to FEMA summarise the broad framework of exchange control

Application of FEMA may be seen broadly from two angles, viz., capital account transactions and current account transactions. Capital account transactions relate to movement of capital, for instance, transactions in property and investments and lending and borrowing money. Transactions which do not fall in capital account category are current account transactions which are permitted freely, subject to a few restrictions as given in the following paragraph.

(a) Certain current account transactions would require RBI permission if they exceed a certain ceiling.

(b) A few current account transactions need permission of appropriate Government of India authority irrespective of the amount.

(c) There are seven types of current account transactions which are totally prohibited, and no transactions can, therefore, be undertaken relating to them. These include transactions relating to lotteries, football pools, banned magazines and a few others.

Some other highlights of the new Act are:

- The Foreign Exchange Management Act and rules give full freedom to a person resident in India, who was earlier resident outside India, to hold or own or transfer any foreign security or immovable property situated outside India and acquired when he/she was resident there.
- Similar freedom is also given to a resident who inherits such security or immovable property from a person resident outside India.
- A person resident outside India is permitted to hold shares, securities, and properties acquired by him while he/she was resident in India.
- A person resident outside India is also permitted to hold such properties inherited from a person resi-dent in India.
- The exchange drawn can also be used for purpose other than for which it is drawn, provided such purpose is otherwise permitted.
- Certain prescribed limits have been substantially enhanced. For instance, residents now going abroad for business purposes, or for participating in conferences/seminars, will not need the Reserve permission to avail foreign exchange up to US $ 25,000 per trip irrespective of the period of basic travel quota has been increased from the existing US $ 3,000 to US $ 5,000 per calendar year.
- The Exchange Earners' Foreign Currency (EEFC) account holders, and Residents' Foreign Exchange (RFC) account holders are permitted to freely use the funds held in EEFC/RFC accounts for payment of all permissible current account transactions.

(All exporters are allowed to retain upto 50% of their export earnings in EEFC accounts. Some categories of exporters are allowed upto 70%.)

- The rules for foreign investment in India and Indian investment abroad are also comprehensive, transparent, and permit Indian companies engaged in certain specified sectors to acquire shares of foreign companies engaged in similar activities by share swap, or exchange through issue of ADRs/ GDRs up to certain specified limits."

Foreign currency financing by Indian companies by way of bank loans and bond issues, and other capital account transactions require advance approvals from the Government and/or RBI. Investment by non-residents in India is also subject to a variety of regulations. A list of capital account transactions by residents and non-residents coming under the purview of these regulations is given in the appendix to this chapter.

A convenient summary of exchange restrictions in its member countries is published by the International Monetary Fund (IMF) in its annual publication titled Exchange Arrangements and Exchange Restrictions.

The liberalisation and unification of the exchange rate in 1993 signalled a significant beginning in the direction of freeing external transactions from cumbersome administrative controls. While exchange controls on some current account transactions, and all capital account transactions are still in place there is now a distinct possibility that the former will be eliminated in the near future, while the latter will be relaxed only gradually. The successive revisions of the guidelines governing external commercial borrowings clearly show a trend towards relaxation of restrictions, in terms of size and maturity of borrowings

which do not require prior approvals. Restrictions on maximum tenor of forward contracts have been done away with, and the RBI at one time permitted transactions like third currency forwards and forward-forward swaps. However, during episodes of excessive volatility in the market, the RBI may and does bring back some of the restrictions at least temporarily. Thus freedom to cancel and rebook forward contract has been partially withdrawn as also the freedom to do forward-forward swaps. The limits on balances that can be held in Exchange Earners' Foreign Currency accounts are temporarily lowered whenever the rupee shows significant weakness, and markets tend to panic. The RBI uses a combination of permission, administrative fiats, monetary policy measures such as raising the discount rate, or the cash reserve ratio, and direct intervention in the forex market to 'manage' the rupee exchange rate.

4.8.2 Foreign exchange market in India

The foreign exchange market in India has three segments. The first segment consists of transaction between the RBI and authorised dealers. The second segment is the inter-bank market in which the banks deal among themselves. The third segment is retail segment in which the authorised dealers deal with their corporate clients and other retail customers. In the retail segment money changes also participate.

Structure of Exchange Rates in Indian Forex Market

In Indian forex market not all the currencies are bought or sold. For the currencies which are$ not frequently traded in Indian forex market, the banks use London or New York or Singapore Markets. From these rates, the cross rates are calculated and the rates are quoted keeping in view the comparative business environment prevailing in these markets.

In fact, authorised dealers (ADs) face, two types of transactions: (1) Clean instruments (known telegraphic transfers (TT), and (ii) Payment against collection (BC, i.e. bill for collection) of documents. In the second category of transactions, the ADs have to provide more services' therefore the two rates have to be different. While fixing the exchange rate for a transaction ADs must consider three aspects:

- Is the transaction clean or documentary?
- Is the bill under consideration a sight or time draft or a usance bill?
- Does the AD have to fork out funds in rupees or in foreign exchange or the reimbursement would be more or less immediate?

After considering these aspects, ADs quote the rates for the following types of instruments:

1. Clean Buying Rate
2. Documentary Buying Rate
3. On Demand (OD) Bills Buying Rate
4. Long Rates
5. Tel Quel Rate
6. D/A Bill buying rate

TT clean buying rate is quoted for transactions of which the reimbursement is more or less immediate. This rate also applies to remittances by mail transfers and bank drafts provided the required conditions are met.

TT Documentary buying rate will be lower than TT clean, because in this case certain documents are to be collected, therefore handling charges are involved.

On Demand Bill Buying Rate is used for sight draft or demand bills that are negotiated or purchased by authorised dealers. For

discounting usance bills, long exchange rates are required. Since different usance bills have different usance period therefore various long term exchange rates were required.

Thus there are several long rates. These quotations are used for usance bills that are discounted by ADs. The applicable rate depends on the usance period.

In all the cases, the usance period will have run for some time before the bill is presented to an authorised dealer for discounting. In such cases, the Tel Quel Rates are quoted. These rates cover the unbroken period of usance.

D/A stands for documents against acceptance and all the DIA rates are long rates. Tel Quel Rates and the D I A rates depend art the transit time involved. Transit time is the time between the payment made to the document holder and the reimbursement of the document from the issuing agency. A traveller cheque is paid at sight, but it takes time to realise these cheques from the issuing bank. Similarly exports bills also involve transit time.

Foreign Exchange Dealers' Association of India (FEDAI) has prescribed transit periods and interest factors. These are taken into account and loaded onto the exchange rates. The main loading factors are:

(i) Handling charges, (ii) expenses on postage, (iii) administrative charges, (iv) stamp duties, (v) commission to the exchange brokers or to correspondent banks, (vi) exchange rate fluctuations, and (vii) profit margins.

Exchange Rate Fixation for Various Types of Quotes

In India, apart from spot contract, an over night (O/N) and tomorrow night (T/N) foreign exchange contract can also be done which

means the delivery next business day or on second business day. At present, the exchange quotations are made in direct quotes but prior to August 2, 1993, the quotes were indirect. The quotations were made in the form of foreign currency per hundred rupees. Now in the inter-bank market, the rates are quoted per unit or per hundred units of foreign currency. Only authorised dealers (ADs) trade in inter-bank market. The rates quoted by ADs are merchant rates at which trading can take place. As we have already stated that there are four types of rates being quoted in the newspapers. These are TT-Bill Rate, Bill Rate, Currency Notes and the Traveller Cheque Rate.

TT-Bill Rate for Immediate Payment: TT Bill Rate is a sight draft or a bill to be paid immediately, the buying and selling rates for such payments are fixed as follows:

TT-Buying Rate = Basic Rate – Exchange Margin

TT-Selling Rate = Basic Rate + Exchange Margin

Suppose the inter-bank rate between rupees and dollars is S (Rs/$) = 35.50 and the exchange margin is 0.12% then TT Buying Rate is = 33.50 – 33.50 × 0.12%

or = 33.50 (1 – 0.0012) = 33.46

TT Selling Rate is = 33.50 + 33.50 × 0.12%

or = 33.50 (1 + 0.0012) = 33.54

The rules of rounding-off the exchange rates are fixed by Foreign Exchange Dealers Association of India (FEDAI).

Bill Rate when the Bill Is to be Sent for Collection: If some delay is involved in payments such as in the case of time draft or bill for collection another margin for the lag in payment to the bank is added in the form of interest payment. This charge is called transit time charges.

Foreign Exchange Dealers Association of India (FEDAI) fixes the exchange margins, transit time and rules for charging interest. These involve discounting for immediate payment. If some service is required the service charges are also· to be added or subtracted to 'the basic rate. For example, banker's drafts issued by other banks or personal cheques then in that case the clearance is involved, i.e., the bills are to be sent for collection overseas; so in this case the Bill buying and selling rates are fixed as follows:

Adjustment of transactions in India

In India, the official rate is determined by the RBI on the basis of the multi-currency basket. The official buying and selling rates are announced. The foreign Exchange Dealers Association (FEDAI) announces indicative free market rate on every business day. The RBI has the discretion to enter the market so as to stabilize the exchange rate. Every authorised dealer has to maintain, at the close of the day a square or near square position in each foreign currency, except for the limits of open positions prescribed for each currency or total currency value. The authorised dealers have now much wider powers of releasing foreign exchange for business travel abroad, medical treatment, the remittance of agency commissions and legal expenses. The bank's payment, in those countries where the bank does not have their branch, are done through a correspondent bank account called **nostro account**. It literally means our account with you. The opposite of this is the vostro account.

4.9 SUMMARY

In this chapter, we have discussed foreign exchange market and segments of foreign exchange market, quotations at the foreign exchange market. Structure of foreign exchange market constitutes retail foreign exchange market, primary price makers, secondary price makers, price

takers. The participants of foreign exchange market are traders, arbitrageurs, speculators, hedgers, commercial banks, government and central banks of different countries. The lesson also discusses two-point arbitrage and three point arbitrage and explains the different concepts of exchange rates e.g. Real Exchange Rate (RER), Nominal Effective Exchange Rate (NEER), Real Effective Exchange Rate (REER), Equilibrium Exchange Rate (EER), Natural Real Exchange Rate (NATREX) etc. The lesson ends with a discussion on Exchange Rate Regimes and Foreign Exchange market in India.

4.10 KEYWORDS

Hedge: A position taken in order to offset the risk associated with some other project.

Interest Rate Parity: A relationship which must hold between one interest rates of two countries.

Option: The right but not the obligation may be to buy (Call) or sell (put) an underlying asset at a given price at a given date.

Over-the Counter (OTC): A market in which transaction take place via telephone, fax and other electronic means of communication as opposed to the trading floor of an exchange.

4.11 SELF ASSESSMENT QUESTIONS

1. What do you mean by "Foreign Exchange Market"? Explain the different segments of foreign exchange market.

2. What is foreign exchange rate? Explain the relationship between spot rates and future rates.

3. Elaborate the participants of foreign exchange market.

4. What do you understand by arbitrage? Explain the different kinds of arbitrage in foreign exchange market.

5. Write a detailed note on settlement of transactions in foreign exchange markets.

6. What do you mean foreign exchange centrals? Explain the history of foreign exchange centrals in India.

7. Write note on the following:
   i) Foreign Exchange Market in India
   ii) Real Effective Exchange Rate (REER)
   iii) Nominal Effective Exchange Rate (NEER)
   iv) Equilibrium Real Exchange Rate (ERER)

4.12 SUGGESTED READINGS

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SECURITISATION AND SEBI GUIDELINES

STRUCTURE

5.0 Objectives

5.1 Meaning of securitisation

5.2 Process of securitisation

5.3 Players involved in securitization

5.4 Types of securitisation

5.5 Advantages of securitisation

5.5.1 Advantages to the originator's

5.5.2 Advantages to the investors

5.5.3 Advantages to the economy

5.6 Securitisation in India

5.6.1 Growth of securitization in India

5.7 Problems with securitization in India

5.8 Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act 2002 (SARFAESI)

5.9 Securitisation and SEBI guidelines

5.10 Summary

5.11 Keywords

5.12 Self assessment questions

5.13 Suggested readings

5.0 OBJECTIVES

After going through this lesson, the learners will be able to

- Understand the meaning, process and types of securitisation.

- Know the benefits of securitisation to the originators, investors and economy.
- Acquaint with securitisation and reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002.

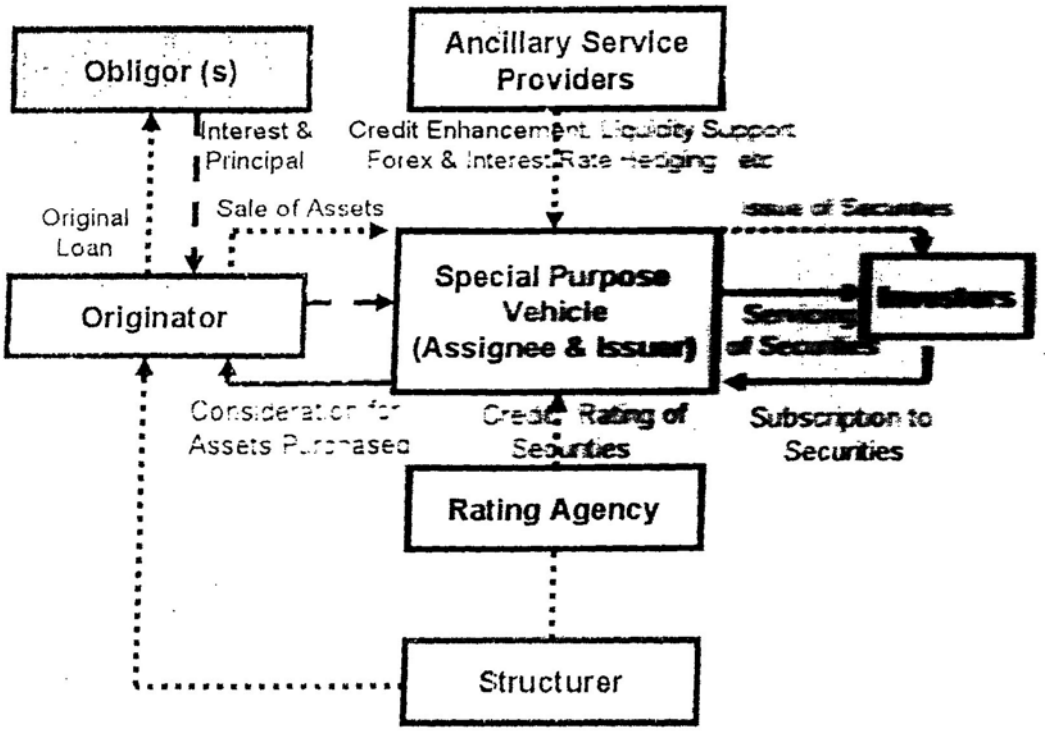
5.1 MEANING OF SECURITISATION

The securitisation is the process of pooling and repackaging of homogeneous illiquid financial assets on the originator's balance sheet into marketable securities that can be sold in the capital markets to the ultimate investor's via the Special Purpose Vehicle (SPV). Securitisation transaction consists of the following steps:

- Creation of special purpose vehicle to hold the financial assets underlying the securities.
- Sale of the financial assets by the originator or holder of the assets to the SPV.
- Issuance of securities by the SPV to the investors against the financial assets held by it.

The securities issued by the SPV could take the shape of asset backed securities (ABS), Mortgage backed Securities (MBS) and infrastructure financing assets.

The securitisation process has put the role of a financial intermediaries like banks and financial institutions who were the 'fund based service providers', on the backburner and has shifted the focus on the fee based service providers, the investment bankers, in the form of the 'special purpose vehicles'. In short, the emphasis in today's scenario is on distribution utility provided by the SPV rather than on pooling utility provided by banks and Financial Institutions for financial purposes. The following model illustrates the process of securitisation-



The corporate clientele is getting attracted to the mechanism of securitization because not only does it make cheaper sources of finance available in comparison to the traditional capital market instruments but also provides 100% working capital finance through devices like asset backed commercial papers. It not only helps the large and well rated companies in their funding requirements but also helps the lesser known or lower rated companies for funding requirement by encouraging them to sell their securities in capital markets. Securitization stretches even as far as providing start up capital to small and medium enterprises who were earlier forced to depend on the commercial banks for their financing requirements.

5.2 PROCESS OF SECURITISATION

Securitisation is a process which takes place when a lending institution's assets are removed in one way or the other from its balance sheet and are funded instead by the investors who purchase a negotiable financial instrument evidencing this indebtness, without recourse to the

original lender. The process of securitization primarily involves three parties namely, the originator, the special purpose vehicle (SPV) and the investor. The originator is the one who owns the financial asset and who wants to offload the same in the market. The originator could be a banking, industrial or finance company. The SPV or in other words the issuer is the one who issues mortgage-backed securities to investor in the market. Generally merchant bankers function as SPV's. Following are the three stages involved in the process of securitization:

Stage 1: Asset identification: The 'originator', first identifies the asset or a pool of assets that have to be securitized. There must be some basic conditions that must be satisfied by an asset, which is to be securitized. For example, the cash flows from the reference asset should be reliable and payments should be periodically obtained. This means that the asset portfolio should have a documented history showing default and delinquency experience. The assets have to be of good quality that in turn facilitates the marketability to be quick and easy. This is to ensure that default risks are brought down considerably. The pool of assets should carry identical dates of interest payment and maturities. Assets that stand a chance of being sold to investors ideally should have the following characteristics:

a) should be well diversified
b) should have a statistical history of loss experience
c) should be homogeneous in nature
d) should be broadly similar in repayment and final maturity structures
e) should be to some extent liquid.

Stage 2: Structuring the asset backed securities (ABS): In a typical securitization deal, the asset originator creates a SPV and sells reference assets to the same. The SPV can either be a trust, corporation or form of partnership set up specifically to purchase the originator's

assets and act as a conduit for the payment flows. Payments advanced by the originators are forwarded to investors according to the terms of the specific securities. The SPV then structures the 'Structuring the asset backed securities (ABS)' based on the preference of the originator and the investors. The type of ABS is decided by the nature of the reference asset and the nature of payments to the investors. To make the ABS attractive to the investors, issuers follow some credit enhancement procedures. Securities are credit enhanced through an insurance or a third party assurance. Sometimes the security is over-collateralized to improve the credit rating of the issue. After structuring the ABS, they are offered to the investor public through a merchant banker. The issuer takes up the responsibility of creating a market in the securities that are created.

Stage 3: Investor Servicing: The investor is serviced by periodic payments depending on the nature of the ABS. According to the terms of the issue, the investor may be paid interest periodically and the principal at the end of the maturity as a bullet payment. Or they may be paid both interest and principal periodically over the period of maturity. Investors buy this risk if they see the risk as a diversifying asset, the risk premium demanded by them for underwriting such a risk is lower than the internal funding costs of the originator who has a concentration of such a risk.

5.3 PLAYERS INVOLVED IN SECURITIZATION

The following primary participants are involved in the issuance of asset-backed securities (ABS)

Originators: Originators create the assets that are sold or used as collateral for asset-backed securities. Originators include finance companies, financial institutions, commercial banks, and insurance companies, thrift institutions and securities firms.

Servicer's: They are usually the originators or affiliates of the originators of the assets, are responsible for collecting principal and interest payments on the assets when due and for pursuing the collection of delinquent accounts. They also provide the trustee and the certificate holders with monthly and annual reports about the portfolio of assets sold or used as collateral. The reports detail the sources collected and the distributed funds, the remaining principal balance, the remaining insurance amount, the amount of fees payable out of the trust and information necessary for certificate holders to prepare their financial statements and to assess their tax liability.

Issuers: The originator does not usually sell assets to third-party investors directly as asset-backed securities. Instead, they are sold first to either a conduits or a 'bankruptcy-remote' finance company. Such companies, known as limited purpose corporation, are subsidiaries or affiliates of the originator or the merchant banker that were separately incorporated to facilitate the sale of assets or to issue collateralized debt instruments. Conduits are issuers of asset-backed securities that do not originate or necessarily service the assets that underlie the securities. They buy assets from different originators or sellers, pool the assets and then sell them to investors.

Merchant bankers: As asset-backed securities issue involves a merchant banker, who either underwrites the securities for public offering or privately places them. As an underwriter, the merchant banker purchases the securities from the issuer for resale. In a private placement, the merchant banker does not purchase the securities and resell them, rather the merchant banker acts as an agent for the issuer, matching the seller with a handful of buyers. The issuer and merchant banker work together to see that the structure of the issue meets all the legal, regulatory, accounting and tax objectives.

Credit enhancers: Credit enhancement is a vehicle that reduces the overall credit risk of a security issue. The purpose of the credit enhancement is to improve the rating, and, therefore, the pricing and marketability of an asset-backed security. Most ABS are credit enhanced. Credit enhancement can be provided by the issuer or by a third party. The issuer has enhanced credit by providing recourse through senior-subordinated structure or by over-collateralization.

Rating agencies: Credit rating agencies assign rating to ABS issues just as they do for corporate bonds. Credit rating is based on three criteria: the probability of the issuer defaulting on the obligation, the nature and provisions of the obligation and the relative position of the obligation in the event of bankruptcy.

Trustees: A trustee in ABS is the intermediary between the servicer and the investors and between the credit enhancer and the investors. The responsibilities of the trustee include buying the assets from the issuer on behalf of the trust and issuing certificates to the investors. As the obligors make principal and interest payments on the assets, the servicer deposits the proceeds in a trust account, and the trustees passes them on the investors.

5.4 TYPES OF SECURITISATION

The two most common type of securitization are:

Mortgage backed securities: MBS are securities wherein mortgages are pooled together and undivided interests or participations in the pool are sold. The mortgage backing, a pass through security is generally of the same loan type in terms of amortization level, payment, adjustable rate etc. Moreover they are similar to with respect to maturity and loan interest rate to the extent where the cash flows can be projected as if the pool were a single mortgage. The originator services the

mortgages collecting the payments and passing through the principal and interest to the security holders after deducting the servicing, guarantee and other fees.

Asset backed securities (ABS): are securities backed by financial assets. These assets generally are receivables other than mortgage loans and may consist of credit card receivables, auto loans, manufactured housing contracts, junk bonds, equipment leases, small business loans guaranteed by some agency home equity loans etc. They differ from other kind of securities offered in the sense that their creditworthiness is derived from sources other than the paying ability of the originator of the underlying assets. They are secured by collaterals and credit is enhanced by internal structural features or external protections which ensure that obligations are met.

5.5 ADVANTAGES OF SECURITISATION

Securitisation in the past has enabled banks and thrift institutions to cope with disintermediation by reshaping their intermediary role and turning them from spread banking to conduct banking, deriving their income from originating and servicing loans ultimately funded by third parties. The requirements for capital adequacy in recent years have also motivated the financial institutions (FIs) to securitize. Securitisation increases lending capacity without having to find additional deposits or capital infusion. Securitisation is also helpful to the investors and economy as a whole. The securitisation is beneficial to the originators, investors and economy.

5.5.1 Advantages to the originator's

Originator firm could be real estate financial corporations, non mortgage finance companies, car rental companies, credit card firms,

electricity and telephone departments of state governments etc. The following are the advantages to the originators:

i) Improves capital adequacy ratio in balance sheet: Capital adequacy ratio is a measure of a banks or financial institution's capital. It is expressed as a percentage of a bank's risk weighted credit exposures. This ratio is used to safeguard depositors and promote the stability of efficiency of financial systems around the world. In this ratio two types of capitals are measured namely tier I capital and tier II capital.

Capital adequacy ratio (CAR) = Capital/Risk weighted assets

The CAR is also known as Cooke or 'BIS' Ratio. According to Basle committee's regulation, this ratio should be at least 8%, and according to RBI guidelines it should be higher than 9%. After calculating the Tier I and Tier II, assets on the balance sheet are weighed for the risk component according to the following weighing Rules:

TABLE: WEIGHTS ASSIGNED TO DIFFERENT ASSETS FOR RISK WEIGHING

Assets categories	**Weight assigned**
Cash and government securities	0%
Inter-bank deposits	20%
Mortgage loans	50%
Loans of all other assets	100%

Credit card and auto finance companies can take their capital adequacy ratios to better levels by securitising credit card receivables and auto loan receivables present on their balance sheet as they are of 100% risk weightage.

(ii) Improves balance sheet ratios: Securitisation of assets improves some of the key ratios and thereby improves the financial health of the firm reflected in the balance sheet. Impact of securitisation

on some of the prominent measures of financial performance is given hereunder:

(a) ROE (Return on equity): It is seen that the process of securitization leads to a capital relief for the originators which further would improve leverage (i.e. debt taking capacity of any firm) and the resultant would be an improvement in the return on equity of an enterprise. ROE basically improves when following three aspects are taken care of by the management.

i) Profitability (PAT/SALES)

ii) Asset Management (SALES/ASSETS) and

iii) Financial Leverage (Asset/Equity)

ROE = Profit Margin × Fixed Assets Turnover × Leverage

Return on equity is the product of the above three factors. If the firm can reduce its equity capital then definitely the ROE would improve. The removal of risk weighted assets from the originator's balance sheet would lead to a reduction in the capital to risk weighted assets ratio and consequently the total cost of financing comes down by this capital relief. Ultimately this would lead to a tremendous improvement in the return on equity of the originator firm.

b) Debt equity ratio: Securitisation process does improve the debt equity ratio of a given company and makes the balance sheet lean and thin by reducing its size. The effect of improved debt equity ratio does not end here. Further it improves the capital structure of the firm leaving the firm with a healthier balance sheet and reduced risk by reducing its debt in the total capital structure.

c) Return on assets: It is a measure of the firm's profitability on its total assets. If a company is going in for the securitization of its assets namely credit card receivables, auto loan receivables, (carrying 100% risk weightage) mortgage loans (carrying 50% risk weightage) etc is anyway going to improve its return on assets. In the whole process of securitization assets are created and are put off the balance sheet by

parking them with an SPV. Therefore, this act by the firm would definitely improve the asset related ratios because though the asset is made to disappear from the firms balance sheet but still the income generated from the asset get accelerated.

(iii) Facilitates risk management: Securitization proves to be a unique risk management tool for the various corporates, banks and financial institutions. Through its peculiar feature of risk tranching it has the capacity to break up the securities being offered to the ultimate investors into various risk return categories. Investors in the capital markets have different risk appetites securitization, by its uniquely created structures like that of collateralized mortgage obligations (CMOs) and collateral debt obligations (CDOs), collateral loan obligation (CLOs) etc. are able to offer the investor different tranches, or simply stated divides the investor in to various series based on their risk return appetite. In the case of a CMO structure the interest is paid to all the investors but the principal amount is paid sequentially based on the priorities of investors discussed above.

The above diagram clearly indicates that the CMO structures has in its kitty various types of risk preference security starting from the A type which are least risky and for which the principal payment is given the first priority to the Z type which are the most risky securities and generally are given a bullet payment right at the end and can be termed as the residual claim generating securities (because they are the equity class).

The risk in the securitization deal is further mitigated with the use of significant variables like credit enhancement, sovereign protections, interest rate of currency hedges and cash flow reallocation. Further getting the securitization deal rated by a good credit rating agency is also essentially perceived as a risk mitigator because the investor would like to heavily rely on the credit rating agency's assessments of the deal.

iv) Cost minimization: A basic benefit which accrues to the originator in a securitization deal is that of minimization of cost. As has been discussed earlier that originator firms are able to improve their capital adequacy ratio with the help of a securitization deal. When this happens the equity capital required to back the various types of risk weighted assets will also be reduced. This evidently would have its effect on the WACC of the enterprise as equity is known to be the costliest source of funding therefore an equity reduction would definitely reduce the cost of funding of the enterprise.

Secondly as a securitization deal has the aspects of credit enhancement, over collateralization and third party guarantees attached to it, getting very good credit ratings for the securities to be issued to the investors would not at all be a problem which would further lead to lowering of borrowing costs for the enterprise.

Finally better asset liability management is possible through the process of securitization, which would also help in lowering the cost factor of the originator firm.

5.5.2 Advantages to the investors

Provision for a variety of securities in one basket: Securitization provides the investors having different investment objectives, with securities of varying risk and return, thereby, it makes convenient for an investor to diversify his holdings into various tranches of securities namely A,B,C … till Z group securities. At the same time an investor can also invest in just one particular tranch that is, may be the A bond or B bond according to his risk preference.

Improved security: Since the securities issued are backed by a pool of cherry picked assets the investors are at a lesser risk in case of default. In a securitization deal the charge is on the asset rather than on the originator. Thus, it is safer for the investor to invest in Asset Backed

Securities rather than invest in the equity capital of the originator's firm. Furthermore, the immune mechanism of securitization deal is very strong against certain events risks like takeovers and restructuring of the originator's firm. Thus, securitization provides better securities to the investors.

Better Ratings: It is often seen that a securitization deal is able to acquire a better rating from rating agencies as compared to the rating of the originator's firm. Usually such deals are rated by more than one credit agencies and always find a better rating, may be of AAA due factors like credit enhancements, financial guarantees, monocline and multiline insurance available to them.

Studies conducted by Moody's and Standards and Poors have shown that in such deals the rating migration (i.e. the downward and upward movement of ratings) is negligent thereby making asset backed securities a safer and better investment. Further due to their regulatory advantages the rated instruments are preferred more than the unrated ones by investment bankers.

Superior returns: Asset backed securities are definitely considered superior to the normal corporate securities available in the financial markets as the former provides superior returns or spreads to the investors in comparison to the other securities of the same rating. In fact the collateralized debt obligation (CDO), a unique kind of securitization structure, has been a very high yield product in the market.

Institutional investor's requirement: Securities provided under the securitization deal actually fit in the bill of certain institutional investors requirements who necessarily may have to invest in triple A grade securities and securities of investment grade. The ABS and MBS are a perfect avenue of investment for such institutional investors.

5.5.3 Advantages to the economy

It has been witnessed that where ever securitization has been introduced, may it be USA, Australia, Canada, Great Britain, Germany etc., it has given to the economy more benefits than one. Moreover for developing nations like India it can really work wonders for its capital market development. It can not only provide freed up capital to the economy but also support infrastructure projects with the help of private participation. The benefits to the economy can be summed up in the following points:

1. **Frees up Resources**: As has been earlier stated that securitization not only lower the borrowing costs of firms and FIs but also lowers the borrowing cost. According to conservative estimate, securitization reduces the annual cost of financing for homeowners and others by 0.5 percent. India can take clue from this and introduce securitization in a transparent and systematic fashion and it can get benefit from this by using the freed up capital for other developmental projects.

2. **Infrastructure financing**: Another benefit which accrues to the national economy by introducing securitization in its capital markets is that it (the latter) can help in financing crucial infrastructure projects, which otherwise find great difficulty in being financed by the government.

3. **Development of Mortgage Sector**: The housing loans with their attractive features of high quality assets with diversified risk and attractive returns, are most suited for a securitization transaction. With the positive orientation of the Indian governmental policies towards securitization for the housing sector would definitely help in bridging the resource gap confronted by the latter. Both the 9th year plan and National Housing Policy (1992) of Government of India identified and

recommended securitization as an essential tool for generating resources for housing.

Due to increasing share of tertiary sector urbanization, and increasing size of the middle class thereby enhancing the ever increasing demand for houses, there is a great potential for the development of the mortgage sector through the process of securitization.

4. Capital market development: With the advent of high quality structured products the national capital markets would definitely develop and prosper at a faster pace. It can be clearly be concluded that the total mechanism of securitization, with its unique features would prove to be a catalyst in the development of capital markets by adding asset backed and mortgage backed securities to the fixed income market. Thus, as is evident there is a strong argument favouring the growth of securitization in nations like India whose capital markets would get a tremendous boost by the presence of such unique financial instruments.

5.6 SECURITISATION IN INDIA

The government enacted the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act) to enable banks and FIs to realise long-term assets, manage problem of liquidity, asset liability mismatches and improve recovery by exercising powers to take possession of securities, sell them and reduce non-performing assets by adopting measures for recovery or construction. The Reserve Bank has so far granted Certificate of Registration to three Asset Reconstruction Companies (ARCs) viz., Asset Reconstruction Company of India Limited (ARCIL), Assets Care Enterprise Limited (ACEL) and ASREC (India) Limited (ASREC). In order to ensure that the ARCs have a sound capital base and a stake in the management of the NPAs so acquired by them, the Reserve Bank has increased the requirement of minimum owned fund for commencement of

business by these companies to an amount not less than 15 per cent of the assets acquired or to be acquired or Rs. 100 crore whichever is less, on an aggregate basis. The percentage of net NPAs to advances of public sector banks in the year 2004-05 was around 9.98%. This figure was around 6.7% for private sector banks and around 3.4% for foreign banks. Bankers and decision makers have been thinking about ways to deal with the problem of NPAs. Banks have been able to recover loans from small borrowers by enforcing their rights, but they have failed to do it from the large borrowers many of them are wilful defaulters. These large borrowers take advantage of the loopholes of the legal system. In order to overcome this problem various tools have been suggested such as one time settlement of dues, flexible packages etc. One alternative that has attracted most of the bankers is the formation of Asset Reconstruction Company (ARC). The concept has been very successful in US and many other countries. Several committees formed to address the issue of NPAs have also advocated setting up of an ARC as an appropriate for Indian conditions. In the wake of economic liberalization today India's banking and financial sector is facing intense pressure and ruthless competition from overseas players, the governments move to introduce a law to float a company exclusively to deal with bad debts of banks and financial institutions is no doubt an action taken in the right direction.

5.6.1 Growth of securitization in India

In the finance year 2005, structured finance market grew by 121% to Rs. 308 billion over the previous financial year. This volume is sizable as compared to total private placement of corporate bonds of Rs. 667 billion during 2005 fiscal year. Asset backed securitization (ABS) grew by strong 176% to Rs. 223 billion during FY 2005. In the year 2006, issuance volume in the Indian structured finance (SF) market declined by 17% to Rs. 256 billion. ABS issuance which had been the key growth driver in 2005, dropped by 20% to Rs. 178 billion during FY 2006.

TABLE: ISSUANCE VOLUMES AND NUMBER OF DEALS IN INDIAN STRUCTURED FINANCE MARKET

Year	Value (Rs. In billion)	Number of deals
2002	36.8	25
2003	77.7	73
2004	139.2	88
2005	308.2	127
2006	256.5	130

Source: ICRA rating feature 2006.

ABS continued to be the largest product class, accounting for 69% of the SF market in FY 2006. This class covers a variety of assets such as cars and utility vehicles, commercial vehicles and personal loans.

TABLE: TREND IN STRUCTURED FINANCE ISSUANCE VOLUMES

	2002	2003	2004	2005	2006
ABS	12.9	36.4	80.9	229.9	178.5
MBS	0.8	14.8	29.6	33.4	50.1
Corporate loan securitization	19.1	24.3	28.3	25.8	21
Partial guarantee	4	1.9	0	16	0
Others	0	0.4	0.5	10	6.8
Total	36.8	77.7	139.2	308.2	256.5

Source: ICRA rating feature 2006.

5.7 PROBLEMS WITH SECURITIZATION IN INDIA

The secondary market in India for debt which could offer an easy exit route to investors is not yet developed. Public sector banks which have a huge pool of debts have so far remained far from these products. Trusts and Provident Funds which are the major source of huge funds, have limitations on investment in structured products. Only regulatory changes could help more funds for investment in these products.

The intermediaries involved in creating a securitized product have to comply with multiple legal provisions to give shape to the product. The financial asset is transferred from the originator to the SPY and thus attracts relevant provisions of Stamp Act, The Transfer of Property Act 1882, The Negotiable Instruments Act, and Registration Act. Moreover lack of clear supporting legal provisions for the features which are integral part of the process of securitization hinders wider acceptability of the product.

The securitization process attracts stamp duty at various stages. The incidence of stamp duty is one of the major concerns which make securitization transaction financially unviable. Typically, the rate of stamp duty ranges from 0.5 per cent to as high as 4 to 8 per cent of the value of transaction. Thus, the process of securitization becomes too expensive. Recently, there has been significant relief since Stamp duty has been reduced to 0.1 per cent in some States. This is so, in Maharashtra in respect of transfer of movables; in Tamil Nadu in respect or transfer of housing loans/security created; and in Gujarat and Karnataka in respect of movables and immovables.

Other area of concern is the registration requirements on transfer of mortgage backed receivables from immovable property which again adds to the cost of securitization transaction and needs to be addressed. Under the Registration Act 1908 transfer requires compulsory registration. This also imposes additional costs to the transaction. Further, some provisions of the Income Tax Act, 1961 are reported to have an impact on securitization. For instance, Section 60 of the Act, contemplates transfer of income without transfer or assets which are the source of the income. In such a case, the income so transferred is chargeable to income tax as the income of the transferor and is included in his total income. Another important aspect which hinders the growth of securitization in India is the lack of effective foreclosure laws. The

existing foreclosure laws are not lender friendly and increase the risks of mortgage backed securities by making it difficult to transfer properly in cases of default. The act does not permit a *Pass Through Structure* (PTC) of SPV which is bankruptcy remote, tax exempt and has no other obligations or liabilities.

5.8 SECURITIZATION AND RECONSTRUCTION OF FINANCIAL ASSETS AND ENFORCEMENT OF SECURITY INTEREST ACT 2002 (SARFAESI)

SARFAESI Act 2002, came into effect from June 21, 2002 and its provisions deal with Securitization along with asset reconstruction and enforcement of security interest. The act deals with three different actions with respect of financial assets held by financial institutions and banks in the form of securitization of financial assets, setting up of asset reconstruction companies and enforcement of security interest. The act is based upon the recommendations of the Narasimhan Committee I and IT and Andhyarujina Committee Reports for enacting a new law for enacting a new law for regulation of securitization and reconstruction of financial assets, enforcement of security interest and formation of asset reconstruction companies. This would help banks and financial institutions to deal NPA in a better way with defaulters.

As per this act Banks and Frs are not permitted to create Special Purpose Vehicles (SPVs) for undertaking securitization transaction. The act calls for setting up of Securitization Companies or Reconstruction Companies with its registration with Reserve Bank of India (RBI) to carryon the business of securitization or asset reconstruction. This company can carry out the work of formulation of schemes and setup (scheme-wise) separate trusts, A securitization company can act as an asset reconstruction company and vice versa, The act provides the reconstruction company the right to acquire financial assets of any bank

by issuing debentures or bonds or any other security in the nature of the debenture. They can also acquire assets by entering into an agreement with such banks of financial institutions. The bank of financial institution gets the rights of the lender in relation to any financial asset acquired by the securitization company. Such company shall on such acquisition be deemed to be the lender and all rights of the bank or financial institution.

The securitization company cannot raise funds from retail investors. It can devise a separate scheme for each of the financial assets taken by it and raise funds only from Qualified Institutional Buyers (QIBs) by developing schemes to acquire assets. The QIBs include FIs, Banks, Insurance Companies, Trusts, Asset Management Companies, Provident Funds, Pension Funds and Foreign Institutional Investors. The company will issue security receipts to QIBs which represents undivided interest in such financial assets. The company will realize the financial assets and redeem the investment and will make payment to returns to QIBs under each scheme. The company should maintain separate set of accounts in respect of every such scheme for every financial asset which has been acquired by the QIB. The company should also ensure the realization of such financial assets and pay returns assured on such investments. In the case of non realization of the financial assets the QIBs of the securitization company or reconstruction company holding security receipts of not less than 75% of the total value of the company is entitled to call a meeting of all the QIBs and every resolution passed in such meeting should be binding on the company Any dispute between QIBs and the company shall he referred for conciliation or arbitration under the Arbitration and Conciliation Act 1996,

If a borrower is in liability to a secured creditor under a security arrangement makes any default in payment of secured debt the secured creditor can intimate the borrower by a notice to discharge full liability to

the secured creditor. If within 60 days from the date of notice the borrower fails to pay the creditor, the creditor is entitled to exercise any of the rights which includes taking possession of the secured assets, taking over the management of the secured asset and appoint any person to manage the secured assets, taking over the management of the secured asset and appoint any person to manage the secured asset. When the management is taken over by secured creditors it will not be lawful for the shareholders of such company to nominate or appoint any person as director. Any resolution passed will require permission or the secured creditors. No office bearer of the borrower company is entitled to any type of compensation for premature loss of office. However the securitization company for the purpose of asset reconstruction provides for effective management of business of the borrower and has the right to sell a part or the whole of the business of the borrower and also reschedule the payment of debts and take possession of secured asset. It can also act as an agent for the banks in the consortium or even act as the receiver appointed by any court. A registry will be set up known as the Central Registry for the purpose of registration of transactions of securitization and reconstruction of financial asset and creation of security interest under the ordinance. The particulars of every transaction would be filed in the registry. Whenever the terms and conditions or the extent operations of the security interest registered are modified it should be the duty of the securitization company or the secured creditor to send to the central registry the particulars of such modification.

5.9 SECURITISATION AND SEBI GUIDELINES

Issue of security by raising of receipts or funds by securitisation company not allowed without prejudice to the provisions contained in the Companies Act, 1956 (1 of 1956), Securities Contracts (Regulation) Act, 1956 (42 of 1956) and the Securities Exchange Board of India Act, 1992

(15 of 1992) and Securitisation Company or Reconstruction Company, may after, acquisition of any financial asset under sub-section (I) of section 5, offer security receipts to qualified institutional buyers (other than by offer to public) for subscription in accordance with the provisions of more acts.

5.10 SUMMARY

The securitisation is the process of pooling and repackaging of homogeneous illiquid financial assets on the originator's balance sheet through special purpose vehicle. The securities issued by SPV could take the shape of asset backed securities (ABS), mortgage backed securities (MBS) and infrastructure financing assets. Securitisation process consists of asset identification, structuring the asset backed securities and investing servicing. The major players in securitisation are originator's, issuer's, merchant bankers, credit enhancers, rating agencies etc. The securitisation is beneficial to the originators, investors and economy as a whole.

5.11 KEYWORDS

Securitisation: The process of homogenizing and packaging financial instruments into a new fungible one.

Special purpose vehicle: An entity created for a special purpose.

Asset based securitisation: A process that creates a series of securities which is collaterised by assets.

Mortgage base securitisation: A process that is backed by mortgage loans.

Non-performing assets (NPA): These loans on which bank is not getting interest and principal payment regularly.

5.12 SELF ASSESSMENT QUESTIONS

1. What do you understand by securitisation? Explain the process of securitisation in India.

2. Explain the advantages of securitisation to the different parties.

3. Write a detailed note on securitisation and reconstruction of financial assets and Enforcement of Security Interest Act 2002.

4. Write short notes on the following-

   a) Growth of securitisation in India

   b) Problems in securitisation

   c) Securitisation and SEBI guidelines

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